

SEQUENCE LISTING

<110> Palka-Hamblin, Helena L.
Tonks, Nicholas K.

<120> DEP-1 RECEPTOR PROTEIN TYROSINE
PHOSPHATASE INTERACTING PROTEINS
AND RELATED METHODS

<130> 200125.447

<140> US

<141> 2003-11-26

<160> 22

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 5117

<212> DNA

<213> Homo sapiens

<400> 1

```

ccccagccgc atgacgcgcg gaggaggcag cgggacgagc gcgggagccg ggaccgggta 60
gccgcgcgct ggggggtgggc gccgctcgct ccgccccgcg aagcccctgc gcgctcaggg 120
acgcggcccc ccgcgggcag ccgcgctagg ctccggcgctg tggccgcggc cgccgcccgc 180
ctgccatgtc tccgggcaag ccggggcggg cggagcgggg acgaggcgga ccggctggcg 240
gaggaggagg cgaaggagac ggcaggaggc ggcgacgacg gtgcccgggc tcgggcgcac 300
ggcggggccc gattcgcgcg tccggggcac gttccagggc gcgcggggca tgaagccggc 360
ggcgcgggag gcgcggctgc ctccgcgctc gcccgggctg cgctgggcgc tgccgctgct 420
gctgctgctg ctgcgcctgg gccagatcct gtgcgcaggt ggcaccccta gtccaattcc 480
tgacccttca gtagcaactg ttgccacagg ggaaaatggc ataacgcaga tcagcagtac 540
agcagaatcc tttcataaac agaatggaac tggaaacacct caggtggaaa caaacaccag 600
tgaggatggt gaaagctctg gagccaacga tagtttaaga acacctgaac aaggatctaa 660
tgggactgat ggggcatctc aaaaaactcc cagtagcact gggcccagtc ctgtgtttga 720
cattaaagct gtttccatca gtccaaccaa tgtgatctta acttggaaaa gtaatgacac 780
agctgcttct gagtacaagt atgtagtaaa gcataagatg gaaaatgaga agacaattac 840
tgttgtgcat caaccatggt gtaacatcac aggcttacgt ccagcgactt catatgtatt 900
ctccatcact ccaggaatag gcaatgagac ttggggagat ccagagtcga taaaagtcac 960
cacagagccg atcccagttt ctgatctccg tgttgccctc acgggtgtga ggaaggctgc 1020
tctctcctgg agcaatggca atggcaccgc ctctgcccgg gttcttcttg aaagcattgg 1080
aagccatgag gagttgactc aagactcaag acttcaggtc aatatctcgg acctgaagcc 1140
aggggttcaa tacaacatca acccgatatc tctacaatca aataagacaa agggagaccc 1200
cttgggcaca gaaggtggct tggatgccag caatacacag agaagccggg caggagaccc 1260
caccgcccct gtgcatgatc agtccctcgt gggacctgtg gacccatcct ccggccagca 1320
gtcccagac acggaagtcg tgcttgcgg gttagagcct ggcacccgat acaatgccac 1380
cgtttattcc caagcacga atggcacga aggcacgccc caggccatag agttcaggac 1440
aaatgctatt caggtttttg acgtcaccgc tgtgaacatc agtgccacaa gcctgaccct 1500
gatctggaaa gtcagcgata acgagtcgtc atctaaactat acctacaaga tacatgtggc 1560
gggggagaca gattcttcca atctcaacgt cagttagcct cgcgctgtca tccccggact 1620
ccgctccagc accttctaca acatcacagt gtgtcctgtc ctaggtgaca tcgagggcac 1680

```

gccgggcttc	ctccaagtgc	acaccccccc	tgttccagtt	tctgacttcc	gagtgcagct	1740
ggtcagcacg	acggagatcg	gcttagcatg	gagcagccat	gatgcagaat	catttcagat	1800
gcatacaca	caggagggag	ctggcaattc	tccggtagaa	ataaccacca	accaaagtat	1860
tatcattggt	ggcttgttcc	ctggaaccaa	gtattgcttt	gaaatagttc	caaaaggacc	1920
aaatgggact	gaaggggcat	ctcggacagt	ttgcaataga	actgttccca	gtgcagtgtt	1980
tgacatccac	gtggtctacg	tcaccaccac	ggagatgtgg	ctggactgga	agagccctga	2040
cggtgcttcc	gagtatgtct	accatttagt	catagagtcc	aagcatggct	ctaaccacac	2100
aagcacgtat	gacaaagcga	ttactctcca	gggcctgatt	ccgggcacct	tatataacat	2160
caccatctct	ccagaagtgg	accacgtctg	gggggacccc	aactccactg	cacagtacac	2220
acggcccagc	aatgtgtcca	acattgatgt	aagtaccaac	accacagcag	caactttaag	2280
ttggcagaac	tttgatgacg	cctctcccac	gtactcctac	tgcttcttta	ttgagaaggc	2340
tggaatttcc	agcaacgcaa	cacaagtagt	cacggacatt	ggaattactg	acgctacagt	2400
cactgaatta	atacctggct	catcatacac	agtggagatc	tttgacaaag	taggggatgg	2460
gatcaagtca	ctggaacctg	gccggaagtc	attctgtaca	gatcctgcgt	ccatggcctc	2520
cttcgactgc	gaagtggctc	ccaaagagcc	agccctggtt	ctcaaagtga	cctgccctcc	2580
tggcgccaat	gcagcctttg	agctggaggt	cagcagtgga	gcctggaaca	atgcgaccca	2640
cctggagagc	tgctcctctg	agaatggcac	tgagtataga	acggaagtca	cgtatttgaa	2700
tttttctacc	tcgtacaaca	tcagcatcac	cactgtgtcc	tgtggaaaga	tggcagcccc	2760
cacccggaac	acctgcacta	ctggcatcac	agatccccct	cctccagatg	gatcccctaa	2820
tattacatct	gtcagtcaca	attcagtaaa	ggtaagttc	agtggatttg	aagccagcca	2880
cggacccatc	aaagcctatg	ctgtcattct	caccaccggg	gaagctggtc	acccttctgc	2940
agatgtcctg	aaatacacgt	atgacgattt	caaaaaggga	gcctcagata	cttatgtgac	3000
atacctcata	agaacagaag	aaaagggacg	ttctcagagc	ttgtctgaag	ttttgaaata	3060
tgaaattgac	gttggaagtg	agtcaaccac	acttggttat	tacaatggga	agctggaacc	3120
tctgggctcc	taccgggctt	gtgtggctgg	cttcaccaac	attaccttcc	accctcaaaa	3180
caaggggctc	attgatgggg	ctgagagcta	tgtgtccttc	agtcgctact	cagatgctgt	3240
ttccttgccc	caggatccag	gtgtcatctg	tggagcgggt	tttggctgta	tctttggtgc	3300
cctggttatt	gtgactgtgg	gaggcttcat	cttctggaga	aagaagagga	aagatgcaaa	3360
gaataatgaa	gtgtcctttt	ctcaaattaa	acctaaaaaa	tctaagttaa	tcagagtggga	3420
gaattttgag	gcctacttca	agaagcagca	agctgactcc	aactgtgggt	tcgcagagga	3480
atacgaagat	ctgaagcttg	ttggaattag	tcaacctaaa	tatgcagcag	aactggctga	3540
gaatagagga	aagaatcgct	ataataatgt	tctgccttat	gatatttccc	gtgtcaaaat	3600
ttcggctccag	accatttcaa	cggatgacta	catcatggcc	aactacatgc	ctggctacca	3660
ctccaaagaaa	gatttttattg	ccacacaagg	acctttaccg	aacactttga	aagatttttg	3720
gcgtatgggt	tgggagaaaa	atgtatatgc	catcattatg	ttgactaaat	gtgttgaaca	3780
gggaagaacc	aaatgtgagg	agtattggcc	ctccaagcag	gctcaggact	atggagacat	3840
aactgtggca	atgacatcag	aaattgttct	tccggaatgg	accatcagag	atttcacagt	3900
gaaaaatatc	cagacaagtg	agagtcaccc	tctgagacag	ttccatttca	cctcctggcc	3960
agaccacggg	gttcccgcga	ccactgacct	gctcatcaac	ttccggtacc	tcgttcgtga	4020
ctacatgaag	cagagtcctc	ccgaatcgcc	gattctgggt	cattgcagtg	ctggggtcgg	4080
aaggacgggc	acttttcattg	ccattgatcg	tctcatctac	cagatagaga	atgagaacac	4140
cgtggatgtg	tatgggattg	tgtatgacct	tcgaatgcat	aggcctttaa	tgggtgcagac	4200
agaggaccag	tatgttttcc	tcaatcagtg	tgttttggtg	attgtcagat	cccagaaaga	4260
ctcaaaagta	gatcttatct	accagaacac	aactgcaatg	acaatctatg	aaaaccttgc	4320
gcccgtagcc	acatttgga	agaccaatgg	ttacatcgcc	taattccaaa	ggaataacct	4380
ttctggagtg	aaccagaccg	tcgcacccac	agcgaaggca	catgccccga	tgtcgacatg	4440
tttttatatg	tctaatatct	taattctttg	ttctgttttg	tgagaactaa	ttttgagggc	4500
atgaagctgc	atatgataga	tgacaaattg	gggctgtcgg	gggctgtgga	tgggtgggga	4560
gcaaatcatc	tgcaattcctg	atgaccaatg	ggatgaggtc	actttttttt	ttttccctct	4620
tgaggattgc	ggaaaaccag	gaaaagggat	ctatgatttt	tttttccaaa	acaattttct	4680
ttttaaaaag	actattttat	atgattcaca	tgctaaagcc	aggatttgtg	tgggttgaat	4740
atatttttaag	tatcagaggt	ctattttttac	ctactgtgtc	ttggaatcta	gccgatggaa	4800
aataccta	tgtggatgat	gattgcgcag	ggaggggtac	gtggcacctc	ttccgaatgg	4860
gttttctatt	tgaacatgtg	ccttttctga	attatgcttc	cacaggcaaa	actcagtaga	4920

```

gatctatatt tttgtactga atctcataat tggaatatac ggaatattta aacagtagct 4980
tagcatcaga ggtttgcttc ctcagtaaca tttctgttct catttgatca ggggaggcct 5040
ctttgccccg gccccgcttc cctgcccc gtgtgatttg tgctccattt tttcttcct 5100
tttccctccc agttttc 5117

```

```

<210> 2
<211> 1337
<212> PRT
<213> Homo sapiens

```

```

<400> 2
Met Lys Pro Ala Ala Arg Glu Ala Arg Leu Pro Pro Arg Ser Pro Gly
1          5          10          15
Leu Arg Trp Ala Leu Pro Leu Leu Leu Leu Leu Arg Leu Gly Gln
20          25          30
Ile Leu Cys Ala Gly Gly Thr Pro Ser Pro Ile Pro Asp Pro Ser Val
35          40          45
Ala Thr Val Ala Thr Gly Glu Asn Gly Ile Thr Gln Ile Ser Ser Thr
50          55          60
Ala Glu Ser Phe His Lys Gln Asn Gly Thr Gly Thr Pro Gln Val Glu
65          70          75          80
Thr Asn Thr Ser Glu Asp Gly Glu Ser Ser Gly Ala Asn Asp Ser Leu
85          90          95
Arg Thr Pro Glu Gln Gly Ser Asn Gly Thr Asp Gly Ala Ser Gln Lys
100         105         110
Thr Pro Ser Ser Thr Gly Pro Ser Pro Val Phe Asp Ile Lys Ala Val
115         120         125
Ser Ile Ser Pro Thr Asn Val Ile Leu Thr Trp Lys Ser Asn Asp Thr
130         135         140
Ala Ala Ser Glu Tyr Lys Tyr Val Val Lys His Lys Met Glu Asn Glu
145         150         155         160
Lys Thr Ile Thr Val Val His Gln Pro Trp Cys Asn Ile Thr Gly Leu
165         170         175
Arg Pro Ala Thr Ser Tyr Val Phe Ser Ile Thr Pro Gly Ile Gly Asn
180         185         190
Glu Thr Trp Gly Asp Pro Arg Val Ile Lys Val Ile Thr Glu Pro Ile
195         200         205
Pro Val Ser Asp Leu Arg Val Ala Leu Thr Gly Val Arg Lys Ala Ala
210         215         220
Leu Ser Trp Ser Asn Gly Asn Gly Thr Ala Ser Cys Arg Val Leu Leu
225         230         235         240
Glu Ser Ile Gly Ser His Glu Glu Leu Thr Gln Asp Ser Arg Leu Gln
245         250         255
Val Asn Ile Ser Asp Leu Lys Pro Gly Val Gln Tyr Asn Ile Asn Pro
260         265         270
Tyr Leu Leu Gln Ser Asn Lys Thr Lys Gly Asp Pro Leu Gly Thr Glu
275         280         285
Gly Gly Leu Asp Ala Ser Asn Thr Glu Arg Ser Arg Ala Gly Ser Pro
290         295         300
Thr Ala Pro Val His Asp Glu Ser Leu Val Gly Pro Val Asp Pro Ser
305         310         315         320
Ser Gly Gln Gln Ser Arg Asp Thr Glu Val Leu Leu Val Gly Leu Glu

```

				325						330						335	
Pro	Gly	Thr	Arg	Tyr	Asn	Ala	Thr	Val	Tyr	Ser	Gln	Ala	Ala	Asn	Gly		
			340					345					350				
Thr	Glu	Gly	Gln	Pro	Gln	Ala	Ile	Glu	Phe	Arg	Thr	Asn	Ala	Ile	Gln		
		355					360					365					
Val	Phe	Asp	Val	Thr	Ala	Val	Asn	Ile	Ser	Ala	Thr	Ser	Leu	Thr	Leu		
	370					375					380						
Ile	Trp	Lys	Val	Ser	Asp	Asn	Glu	Ser	Ser	Ser	Asn	Tyr	Thr	Tyr	Lys		
385					390					395					400		
Ile	His	Val	Ala	Gly	Glu	Thr	Asp	Ser	Ser	Asn	Leu	Asn	Val	Ser	Glu		
				405					410					415			
Pro	Arg	Ala	Val	Ile	Pro	Gly	Leu	Arg	Ser	Ser	Thr	Phe	Tyr	Asn	Ile		
			420					425					430				
Thr	Val	Cys	Pro	Val	Leu	Gly	Asp	Ile	Glu	Gly	Thr	Pro	Gly	Phe	Leu		
		435					440					445					
Gln	Val	His	Thr	Pro	Pro	Val	Pro	Val	Ser	Asp	Phe	Arg	Val	Thr	Val		
	450					455					460						
Val	Ser	Thr	Thr	Glu	Ile	Gly	Leu	Ala	Trp	Ser	Ser	His	Asp	Ala	Glu		
465					470					475					480		
Ser	Phe	Gln	Met	His	Ile	Thr	Gln	Glu	Gly	Ala	Gly	Asn	Ser	Arg	Val		
				485					490					495			
Glu	Ile	Thr	Thr	Asn	Gln	Ser	Ile	Ile	Ile	Gly	Gly	Leu	Phe	Pro	Gly		
			500					505					510				
Thr	Lys	Tyr	Cys	Phe	Glu	Ile	Val	Pro	Lys	Gly	Pro	Asn	Gly	Thr	Glu		
		515					520					525					
Gly	Ala	Ser	Arg	Thr	Val	Cys	Asn	Arg	Thr	Val	Pro	Ser	Ala	Val	Phe		
	530					535					540						
Asp	Ile	His	Val	Val	Tyr	Val	Thr	Thr	Thr	Glu	Met	Trp	Leu	Asp	Trp		
545					550					555					560		
Lys	Ser	Pro	Asp	Gly	Ala	Ser	Glu	Tyr	Val	Tyr	His	Leu	Val	Ile	Glu		
				565					570					575			
Ser	Lys	His	Gly	Ser	Asn	His	Thr	Ser	Thr	Tyr	Asp	Lys	Ala	Ile	Thr		
			580					585				590					
Leu	Gln	Gly	Leu	Ile	Pro	Gly	Thr	Leu	Tyr	Asn	Ile	Thr	Ile	Ser	Pro		
		595					600					605					
Glu	Val	Asp	His	Val	Trp	Gly	Asp	Pro	Asn	Ser	Thr	Ala	Gln	Tyr	Thr		
	610					615					620						
Arg	Pro	Ser	Asn	Val	Ser	Asn	Ile	Asp	Val	Ser	Thr	Asn	Thr	Thr	Ala		
625					630					635					640		
Ala	Thr	Leu	Ser	Trp	Gln	Asn	Phe	Asp	Asp	Ala	Ser	Pro	Thr	Tyr	Ser		
				645					650					655			
Tyr	Cys	Leu	Leu	Ile	Glu	Lys	Ala	Gly	Asn	Ser	Ser	Asn	Ala	Thr	Gln		
			660					665									

		755					760					765				
Ser	Ser	Glu	Asn	Gly	Thr	Glu	Tyr	Arg	Thr	Glu	Val	Thr	Tyr	Leu	Asn	
	770					775					780					
Phe	Ser	Thr	Ser	Tyr	Asn	Ile	Ser	Ile	Thr	Thr	Val	Ser	Cys	Gly	Lys	
785					790					795					800	
Met	Ala	Ala	Pro	Thr	Arg	Asn	Thr	Cys	Thr	Thr	Gly	Ile	Thr	Asp	Pro	
				805					810					815		
Pro	Pro	Pro	Asp	Gly	Ser	Pro	Asn	Ile	Thr	Ser	Val	Ser	His	Asn	Ser	
			820					825					830			
Val	Lys	Val	Lys	Phe	Ser	Gly	Phe	Glu	Ala	Ser	His	Gly	Pro	Ile	Lys	
		835				840						845				
Ala	Tyr	Ala	Val	Ile	Leu	Thr	Thr	Gly	Glu	Ala	Gly	His	Pro	Ser	Ala	
	850					855					860					
Asp	Val	Leu	Lys	Tyr	Thr	Tyr	Asp	Asp	Phe	Lys	Lys	Gly	Ala	Ser	Asp	
865					870					875					880	
Thr	Tyr	Val	Thr	Tyr	Leu	Ile	Arg	Thr	Glu	Glu	Lys	Gly	Arg	Ser	Gln	
			885						890					895		
Ser	Leu	Ser	Glu	Val	Leu	Lys	Tyr	Glu	Ile	Asp	Val	Gly	Asn	Glu	Ser	
			900					905					910			
Thr	Thr	Leu	Gly	Tyr	Tyr	Asn	Gly	Lys	Leu	Glu	Pro	Leu	Gly	Ser	Tyr	
		915				920						925				
Arg	Ala	Cys	Val	Ala	Gly	Phe	Thr	Asn	Ile	Thr	Phe	His	Pro	Gln	Asn	
	930				935						940					
Lys	Gly	Leu	Ile	Asp	Gly	Ala	Glu	Ser	Tyr	Val	Ser	Phe	Ser	Arg	Tyr	
945				950						955					960	
Ser	Asp	Ala	Val	Ser	Leu	Pro	Gln	Asp	Pro	Gly	Val	Ile	Cys	Gly	Ala	
			965					970						975		
Val	Phe	Gly	Cys	Ile	Phe	Gly	Ala	Leu	Val	Ile	Val	Thr	Val	Gly	Gly	
		980						985				990				
Phe	Ile	Phe	Trp	Arg	Lys	Lys	Arg	Lys	Asp	Ala	Lys	Asn	Asn	Glu	Val	
		995					1000					1005				
Ser	Phe	Ser	Gln	Ile	Lys	Pro	Lys	Lys	Ser	Lys	Leu	Ile	Arg	Val	Glu	
	1010					1015					1020					
Asn	Phe	Glu	Ala	Tyr	Phe	Lys	Lys	Gln	Gln	Ala	Asp	Ser	Asn	Cys	Gly	
1025				1030						1035					1040	
Phe	Ala	Glu	Glu	Tyr	Glu	Asp	Leu	Lys	Leu	Val	Gly	Ile	Ser	Gln	Pro	
			1045						1050					1055		
Lys	Tyr	Ala	Ala	Glu	Leu	Ala	Glu	Asn	Arg	Gly	Lys	Asn	Arg	Tyr	Asn	
		1060						1065					1070			
Asn	Val	Leu	Pro	Tyr	Asp	Ile	Ser	Arg	Val	Lys	Leu	Ser	Val	Gln	Thr	
		1075						1080					1085			
His	Ser	Thr	Asp	Asp	Tyr	Ile	Asn	Ala	Asn	Tyr	Met	Pro	Gly	Tyr	His	
	1090				1095											

```

1185          1190          1195          1200
Thr Ser Trp Pro Asp His Gly Val Pro Asp Thr Thr Asp Leu Leu Ile
          1205          1210          1215
Asn Phe Arg Tyr Leu Val Arg Asp Tyr Met Lys Gln Ser Pro Pro Glu
          1220          1225          1230
Ser Pro Ile Leu Val His Cys Ser Ala Gly Val Gly Arg Thr Gly Thr
          1235          1240          1245
Phe Ile Ala Ile Asp Arg Leu Ile Tyr Gln Ile Glu Asn Glu Asn Thr
          1250          1255          1260
Val Asp Val Tyr Gly Ile Val Tyr Asp Leu Arg Met His Arg Pro Leu
1265          1270          1275          1280
Met Val Gln Thr Glu Asp Gln Tyr Val Phe Leu Asn Gln Cys Val Leu
          1285          1290          1295
Asp Ile Val Arg Ser Gln Lys Asp Ser Lys Val Asp Leu Ile Tyr Gln
          1300          1305          1310
Asn Thr Thr Ala Met Thr Ile Tyr Glu Asn Leu Ala Pro Val Thr Thr
          1315          1320          1325
Phe Gly Lys Thr Asn Gly Tyr Ile Ala
          1330          1335

```

```

<210> 3
<211> 341
<212> PRT
<213> Homo sapiens

```

```

<400> 3
Arg Lys Lys Arg Lys Asp Ala Lys Asn Asn Glu Val Ser Phe Ser Gln
 1          5          10          15
Ile Lys Pro Lys Lys Ser Lys Leu Ile Arg Val Glu Asn Phe Glu Ala
 20          25          30
Tyr Phe Lys Lys Gln Gln Ala Asp Ser Asn Cys Gly Phe Ala Glu Glu
 35          40          45
Tyr Glu Asp Leu Lys Leu Val Gly Ile Ser Gln Pro Lys Tyr Ala Ala
 50          55          60
Glu Leu Ala Glu Asn Arg Gly Lys Asn Arg Tyr Asn Asn Val Leu Pro
65          70          75          80
Tyr Asp Ile Ser Arg Val Lys Leu Ser Val Gln Thr His Ser Thr Asp
 85          90          95
Asp Tyr Ile Asn Ala Asn Tyr Met Pro Gly Tyr His Ser Lys Lys Asp
100          105          110
Phe Ile Ala Thr Gln Gly Pro Leu Pro Asn Thr Leu Lys Asp Phe Trp
115          120          125
Arg Met Val Trp Glu Lys Asn Val Tyr Ala Ile Ile Met Leu Thr Lys
130          135          140
Cys Val Glu Gln Gly Arg Thr Lys Cys Glu Glu Tyr Trp Pro Ser Lys
145          150          155          160
Gln Ala Gln Asp Tyr Gly Asp Ile Thr Val Ala Met Thr Ser Glu Ile
165          170          175
Val Leu Pro Glu Trp Thr Ile Arg Asp Phe Thr Val Lys Asn Ile Gln
180          185          190
Thr Ser Glu Ser His Pro Leu Arg Gln Phe His Phe Thr Ser Trp Pro
195          200          205
Asp His Gly Val Pro Asp Thr Thr Asp Leu Leu Ile Asn Phe Arg Tyr

```

210	215	220
Leu Val Arg Asp Tyr Met Lys Gln Ser Pro Pro Glu Ser Pro Ile Leu		
225	230	235
Val His Cys Ser Ala Gly Val Gly Arg Thr Gly Thr Phe Ile Ala Ile		240
	245	250
Asp Arg Leu Ile Tyr Gln Ile Glu Asn Glu Asn Thr Val Asp Val Tyr		255
	260	265
Gly Ile Val Tyr Asp Leu Arg Met His Arg Pro Leu Met Val Gln Thr		270
	275	280
Glu Asp Gln Tyr Val Phe Leu Asn Gln Cys Val Leu Asp Ile Val Arg		285
	290	295
Ser Gln Lys Asp Ser Lys Val Asp Leu Ile Tyr Gln Asn Thr Thr Ala		300
305	310	315
Met Thr Ile Tyr Glu Asn Leu Ala Pro Val Thr Thr Phe Gly Lys Thr		320
	325	330
Asn Gly Tyr Ile Ala		335
	340	

<210> 4
 <211> 1390
 <212> PRT
 <213> Homo sapiens

<400> 4
Met Lys Ala Pro Ala Val Leu Ala Pro Gly Ile Leu Val Leu Leu Phe
1 5 10 15
Thr Leu Val Gln Arg Ser Asn Gly Glu Cys Lys Glu Ala Leu Ala Lys
20 25 30
Ser Glu Met Asn Val Asn Met Lys Tyr Gln Leu Pro Asn Phe Thr Ala
35 40 45
Glu Thr Pro Ile Gln Asn Val Ile Leu His Glu His Ile Phe Leu
50 55 60
Gly Ala Thr Asn Tyr Ile Tyr Val Leu Asn Glu Glu Asp Leu Gln Lys
65 70 75 80
Val Ala Glu Tyr Lys Thr Gly Pro Val Leu Glu His Pro Asp Cys Phe
85 90 95
Pro Cys Gln Asp Cys Ser Ser Lys Ala Asn Leu Ser Gly Gly Val Trp
100 105 110
Lys Asp Asn Ile Asn Met Ala Leu Val Val Asp Thr Tyr Tyr Asp Asp
115 120 125
Gln Leu Ile Ser Cys Gly Ser Val Asn Arg Gly Thr Cys Gln Arg His
130 135 140
Val Phe Pro His Asn His Thr Ala Asp Ile Gln Ser Glu Val His Cys
145 150 155 160
Ile Phe Ser Pro Gln Ile Glu Glu Pro Ser Gln Cys Pro Asp Cys Val
165 170 175
Val Ser Ala Leu Gly Ala Lys Val Leu Ser Ser Val Lys Asp Arg Phe
180 185 190
Ile Asn Phe Phe Val Gly Asn Thr Ile Asn Ser Ser Tyr Phe Pro Asp
195 200 205
His Pro Leu His Ser Ile Ser Val Arg Arg Leu Lys Glu Thr Lys Asp
210 215 220
Gly Phe Met Phe Leu Thr Asp Gln Ser Tyr Ile Asp Val Leu Pro Glu

225					230					235					240
Phe	Arg	Asp	Ser	Tyr	Pro	Ile	Lys	Tyr	Val	His	Ala	Phe	Glu	Ser	Asn
				245					250					255	
Asn	Phe	Ile	Tyr	Phe	Leu	Thr	Val	Gln	Arg	Glu	Thr	Leu	Asp	Ala	Gln
			260					265					270		
Thr	Phe	His	Thr	Arg	Ile	Ile	Arg	Phe	Cys	Ser	Ile	Asn	Ser	Gly	Leu
		275					280					285			
His	Ser	Tyr	Met	Glu	Met	Pro	Leu	Glu	Cys	Ile	Leu	Thr	Glu	Lys	Arg
	290					295					300				
Lys	Lys	Arg	Ser	Thr	Lys	Lys	Glu	Val	Phe	Asn	Ile	Leu	Gln	Ala	Ala
305					310					315					320
Tyr	Val	Ser	Lys	Pro	Gly	Ala	Gln	Leu	Ala	Arg	Gln	Ile	Gly	Ala	Ser
				325					330					335	
Leu	Asn	Asp	Asp	Ile	Leu	Phe	Gly	Val	Phe	Ala	Gln	Ser	Lys	Pro	Asp
		340					345						350		
Ser	Ala	Glu	Pro	Met	Asp	Arg	Ser	Ala	Met	Cys	Ala	Phe	Pro	Ile	Lys
	355						360					365			
Tyr	Val	Asn	Asp	Phe	Phe	Asn	Lys	Ile	Val	Asn	Lys	Asn	Asn	Val	Arg
	370					375					380				
Cys	Leu	Gln	His	Phe	Tyr	Gly	Pro	Asn	His	Glu	His	Cys	Phe	Asn	Arg
385					390					395					400
Thr	Leu	Leu	Arg	Asn	Ser	Ser	Gly	Cys	Glu	Ala	Arg	Arg	Asp	Glu	Tyr
			405						410					415	
Arg	Thr	Glu	Phe	Thr	Thr	Ala	Leu	Gln	Arg	Val	Asp	Leu	Phe	Met	Gly
		420						425					430		
Gln	Phe	Ser	Glu	Val	Leu	Leu	Thr	Ser	Ile	Ser	Thr	Phe	Ile	Lys	Gly
	435						440					445			
Asp	Leu	Thr	Ile	Ala	Asn	Leu	Gly	Thr	Ser	Glu	Gly	Arg	Phe	Met	Gln
	450					455					460				
Val	Val	Val	Ser	Arg	Ser	Gly	Pro	Ser	Thr	Pro	His	Val	Asn	Phe	Leu
465					470					475					480
Leu	Asp	Ser	His	Pro	Val	Ser	Pro	Glu	Val	Ile	Val	Glu	His	Thr	Leu
			485					490						495	
Asn	Gln	Asn	Gly	Tyr	Thr	Leu	Val	Ile	Thr	Gly	Lys	Lys	Ile	Thr	Lys
			500					505					510		
Ile	Pro	Leu	Asn	Gly	Leu	Gly	Cys	Arg	His	Phe	Gln	Ser	Cys	Ser	Gln
	515						520					525			
Cys	Leu	Ser	Ala	Pro	Pro	Phe	Val	Gln	Cys	Gly	Trp	Cys	His	Asp	Lys
	530					535					540				
Cys	Val	Arg	Ser	Glu	Glu	Cys	Leu	Ser	Gly	Thr	Trp	Thr	Gln	Gln	Ile
545					550					555					560
Cys	Leu	Pro	Ala	Ile	Tyr	Lys	Val	Phe	Pro	Asn	Ser	Ala	Pro	Leu	Glu
			565						570					575	
Gly	Gly	Thr	Arg	Leu	Thr	Ile	Cys	Gly	Trp	Asp	Phe	Gly	Phe	Arg	Arg
		580						585					590		
Asn	Asn	Lys	Phe	Asp	Leu	Lys	Lys	Thr	Arg	Val	Leu	Leu	Gly	Asn	Glu
	595						600					605			
Ser	Cys	Thr	Leu	Thr	Leu	Ser	Glu	Ser	Thr	Met	Asn	Thr	Leu	Lys	Cys
	610					615					620				
Thr	Val	Gly	Pro	Ala	Met	Asn	Lys	His	Phe	Asn	Met	Ser	Ile	Ile	Ile
625					630					635					640
Ser	Asn	Gly	His	Gly	Thr	Thr	Gln	Tyr	Ser	Thr	Phe	Ser	Tyr	Val	Asp
			645					650						655	
Pro	Val	Ile	Thr	Ser	Ile	Ser	Pro	Lys	Tyr	Gly	Pro	Met	Ala	Gly	Gly

			660						665						670					
Thr	Leu	Leu	Thr	Leu	Thr	Gly	Asn	Tyr	Leu	Asn	Ser	Gly	Asn	Ser	Arg					
		675					680					685								
His	Ile	Ser	Ile	Gly	Gly	Lys	Thr	Cys	Thr	Leu	Lys	Ser	Val	Ser	Asn					
	690					695					700									
Ser	Ile	Leu	Glu	Cys	Tyr	Thr	Pro	Ala	Gln	Thr	Ile	Ser	Thr	Glu	Phe					
705					710						715				720					
Ala	Val	Lys	Leu	Lys	Ile	Asp	Leu	Ala	Asn	Arg	Glu	Thr	Ser	Ile	Phe					
				725						730					735					
Ser	Tyr	Arg	Glu	Asp	Pro	Ile	Val	Tyr	Glu	Ile	His	Pro	Thr	Lys	Ser					
			740					745					750							
Phe	Ile	Ser	Gly	Gly	Ser	Thr	Ile	Thr	Gly	Val	Gly	Lys	Asn	Leu	Asn					
		755					760					765								
Ser	Val	Ser	Val	Pro	Arg	Met	Val	Ile	Asn	Val	His	Glu	Ala	Gly	Arg					
	770					775						780								
Asn	Phe	Thr	Val	Ala	Cys	Gln	His	Arg	Ser	Asn	Ser	Glu	Ile	Ile	Cys					
785					790						795				800					
Cys	Thr	Thr	Pro	Ser	Leu	Gln	Gln	Leu	Asn	Leu	Gln	Leu	Pro	Leu	Lys					
				805						810					815					
Thr	Lys	Ala	Phe	Phe	Met	Leu	Asp	Gly	Ile	Leu	Ser	Lys	Tyr	Phe	Asp					
			820					825					830							
Leu	Ile	Tyr	Val	His	Asn	Pro	Val	Phe	Lys	Pro	Phe	Glu	Lys	Pro	Val					
		835					840					845								
Met	Ile	Ser	Met	Gly	Asn	Glu	Asn	Val	Leu	Glu	Ile	Lys	Gly	Asn	Asp					
	850					855						860								
Ile	Asp	Pro	Glu	Ala	Val	Lys	Gly	Glu	Val	Leu	Lys	Val	Gly	Asn	Lys					
865					870						875				880					
Ser	Cys	Glu	Asn	Ile	His	Leu	His	Ser	Glu	Ala	Val	Leu	Cys	Thr	Val					
				885					890					895						
Pro	Asn	Asp	Leu	Leu	Lys	Leu	Asn	Ser	Glu	Leu	Asn	Ile	Glu	Trp	Lys					
			900					905					910							
Gln	Ala	Ile	Ser	Ser	Thr	Val	Leu	Gly	Lys	Val	Ile	Val	Gln	Pro	Asp					
		915					920					925								
Gln	Asn	Phe	Thr	Gly	Leu	Ile	Ala	Gly	Val	Val	Ser	Ile	Ser	Thr	Ala					
	930					935					940									
Leu	Leu	Leu	Leu	Leu	Gly	Phe	Phe	Leu	Trp	Leu	Lys	Lys	Arg	Lys	Gln					
945					950						955				960					
Ile	Lys	Asp	Leu	Gly	Ser	Glu	Leu	Val	Arg	Tyr	Asp	Ala	Arg	Val	His					
				965					970					975						
Thr	Pro	His	Leu	Asp	Arg	Leu	Val	Ser	Ala	Arg	Ser	Val	Ser	Pro	Thr					
			980					985					990							
Thr	Glu	Met	Val	Ser	Asn	Glu	Ser	Val	Asp	Tyr	Arg	Ala	Thr	Phe	Pro					
		995						1000					1005							

1090	1095	1100
Ile His Cys Ala Val Lys Ser Leu Asn Arg Ile Thr Asp Ile Gly Glu		
1105	1110	1115
Val Ser Gln Phe Leu Thr Glu Gly Ile Ile Met Lys Asp Phe Ser His		1120
	1125	1130
Pro Asn Val Leu Ser Leu Leu Gly Ile Cys Leu Arg Ser Glu Gly Ser		1135
	1140	1145
Pro Leu Val Val Leu Pro Tyr Met Lys His Gly Asp Leu Arg Asn Phe		1150
	1155	1160
Ile Arg Asn Glu Thr His Asn Pro Thr Val Lys Asp Leu Ile Gly Phe		1165
	1170	1175
Gly Leu Gln Val Ala Lys Gly Met Lys Tyr Leu Ala Ser Lys Lys Phe		1180
1185	1190	1195
Val His Arg Asp Leu Ala Ala Arg Asn Cys Met Leu Asp Glu Lys Phe		1200
	1205	1210
Thr Val Lys Val Ala Asp Phe Gly Leu Ala Arg Asp Met Tyr Asp Lys		1215
	1220	1225
Glu Tyr Tyr Ser Val His Asn Lys Thr Gly Ala Lys Leu Pro Val Lys		1230
	1235	1240
Trp Met Ala Leu Glu Ser Leu Gln Thr Gln Lys Phe Thr Thr Lys Ser		1245
	1250	1255
Asp Val Trp Ser Phe Gly Val Val Leu Trp Glu Leu Met Thr Arg Gly		1260
1265	1270	1275
Ala Pro Pro Tyr Pro Asp Val Asn Thr Phe Asp Ile Thr Val Tyr Leu		1280
	1285	1290
Leu Gln Gly Arg Arg Leu Leu Gln Pro Glu Tyr Cys Pro Asp Pro Leu		1295
	1300	1305
Tyr Glu Val Met Leu Lys Cys Trp His Pro Lys Ala Glu Met Arg Pro		1310
	1315	1320
Ser Phe Ser Glu Leu Val Ser Arg Ile Ser Ala Ile Phe Ser Thr Phe		1325
	1330	1335
Ile Gly Glu His Tyr Val His Val Asn Ala Thr Tyr Val Asn Val Lys		1340
1345	1350	1355
Cys Val Ala Pro Tyr Pro Ser Leu Leu Ser Ser Glu Asp Asn Ala Asp		1360
	1365	1370
Asp Glu Val Asp Thr Arg Pro Ala Ser Phe Trp Glu Thr Ser		1375
	1380	1385
		1390

<210> 5

<211> 1408

<212> PRT

<213> Homo sapiens

<400> 5

Met Lys Ala Pro Ala Val Leu Ala Pro Gly Ile Leu Val Leu Leu Phe	
1	5
Thr Leu Val Gln Arg Ser Asn Gly Glu Cys Lys Glu Ala Leu Ala Lys	10
	15
	20
Ser Glu Met Asn Val Asn Met Lys Tyr Gln Leu Pro Asn Phe Thr Ala	25
	30
	35
	40
	45
Glu Thr Pro Ile Gln Asn Val Ile Leu His Glu His His Ile Phe Leu	50
	55
	60
Gly Ala Thr Asn Tyr Ile Tyr Val Leu Asn Glu Glu Asp Leu Gln Lys	

65					70					75					80
Val	Ala	Glu	Tyr	Lys	Thr	Gly	Pro	Val	Leu	Glu	His	Pro	Asp	Cys	Phe
				85					90					95	
Pro	Cys	Gln	Asp	Cys	Ser	Ser	Lys	Ala	Asn	Leu	Ser	Gly	Gly	Val	Trp
			100					105					110		
Lys	Asp	Asn	Ile	Asn	Met	Ala	Leu	Val	Val	Asp	Thr	Tyr	Tyr	Asp	Asp
			115				120					125			
Gln	Leu	Ile	Ser	Cys	Gly	Ser	Val	Asn	Arg	Gly	Thr	Cys	Gln	Arg	His
			130			135					140				
Val	Phe	Pro	His	Asn	His	Thr	Ala	Asp	Ile	Gln	Ser	Glu	Val	His	Cys
145					150					155					160
Ile	Phe	Ser	Pro	Gln	Ile	Glu	Glu	Pro	Ser	Gln	Cys	Pro	Asp	Cys	Val
				165					170					175	
Val	Ser	Ala	Leu	Gly	Ala	Lys	Val	Leu	Ser	Ser	Val	Lys	Asp	Arg	Phe
			180					185					190		
Ile	Asn	Phe	Phe	Val	Gly	Asn	Thr	Ile	Asn	Ser	Ser	Tyr	Phe	Pro	Asp
		195				200						205			
His	Pro	Leu	His	Ser	Ile	Ser	Val	Arg	Arg	Leu	Lys	Glu	Thr	Lys	Asp
	210					215					220				
Gly	Phe	Met	Phe	Leu	Thr	Asp	Gln	Ser	Tyr	Ile	Asp	Val	Leu	Pro	Glu
225					230					235					240
Phe	Arg	Asp	Ser	Tyr	Pro	Ile	Lys	Tyr	Val	His	Ala	Phe	Glu	Ser	Asn
				245					250					255	
Asn	Phe	Ile	Tyr	Phe	Leu	Thr	Val	Gln	Arg	Glu	Thr	Leu	Asp	Ala	Gln
			260					265					270		
Thr	Phe	His	Thr	Arg	Ile	Ile	Arg	Phe	Cys	Ser	Ile	Asn	Ser	Gly	Leu
		275					280					285			
His	Ser	Tyr	Met	Glu	Met	Pro	Leu	Glu	Cys	Ile	Leu	Thr	Glu	Lys	Arg
	290					295					300				
Lys	Lys	Arg	Ser	Thr	Lys	Lys	Glu	Val	Phe	Asn	Ile	Leu	Gln	Ala	Ala
305					310					315					320
Tyr	Val	Ser	Lys	Pro	Gly	Ala	Gln	Leu	Ala	Arg	Gln	Ile	Gly	Ala	Ser
				325					330					335	
Leu	Asn	Asp	Asp	Ile	Leu	Phe	Gly	Val	Phe	Ala	Gln	Ser	Lys	Pro	Asp
			340					345					350		
Ser	Ala	Glu	Pro	Met	Asp	Arg	Ser	Ala	Met	Cys	Ala	Phe	Pro	Ile	Lys
		355					360					365			
Tyr	Val	Asn	Asp	Phe	Phe	Asn	Lys	Ile	Val	Asn	Lys	Asn	Asn	Val	Arg
	370					375					380				
Cys	Leu	Gln	His	Phe	Tyr	Gly	Pro	Asn	His	Glu	His	Cys	Phe	Asn	Arg
385					390					395					400
Thr	Leu	Leu	Arg	Asn	Ser	Ser	Gly	Cys	Glu	Ala	Arg	Arg	Asp	Glu	Tyr
				405					410					415	
Arg	Thr	Glu	Phe	Thr	Thr	Ala	Leu	Gln	Arg	Val	Asp	Leu	Phe	Met	Gly
			420					425					430		
Gln	Phe	Ser	Glu	Val	Leu	Leu	Thr	Ser	Ile	Ser	Thr	Phe	Ile	Lys	Gly
	435						440					445			
Asp	Leu	Thr	Ile	Ala	Asn	Leu	Gly	Thr	Ser	Glu	Gly	Arg	Phe	Met	Gln
	450					455					460				
Val	Val	Val	Ser	Arg	Ser	Gly	Pro	Ser	Thr	Pro	His	Val	Asn	Phe	Leu
465					470					475					480
Leu	Asp	Ser	His	Pro	Val	Ser	Pro	Glu	Val	Ile	Val	Glu	His	Thr	Leu
				485					490					495	
Asn	Gln	Asn	Gly	Tyr	Thr	Leu	Val	Ile	Thr	Gly	Lys	Lys	Ile	Thr	Lys

			500					505					510				
Ile	Pro	Leu	Asn	Gly	Leu	Gly	Cys	Arg	His	Phe	Gln	Ser	Cys	Ser	Gln		
		515					520					525					
Cys	Leu	Ser	Ala	Pro	Pro	Phe	Val	Gln	Cys	Gly	Trp	Cys	His	Asp	Lys		
	530					535					540						
Cys	Val	Arg	Ser	Glu	Glu	Cys	Leu	Ser	Gly	Thr	Trp	Thr	Gln	Gln	Ile		
545				550						555					560		
Cys	Leu	Pro	Ala	Ile	Tyr	Lys	Val	Phe	Pro	Asn	Ser	Ala	Pro	Leu	Glu		
			565						570					575			
Gly	Gly	Thr	Arg	Leu	Thr	Ile	Cys	Gly	Trp	Asp	Phe	Gly	Phe	Arg	Arg		
			580					585					590				
Asn	Asn	Lys	Phe	Asp	Leu	Lys	Lys	Thr	Arg	Val	Leu	Leu	Gly	Asn	Glu		
		595					600					605					
Ser	Cys	Thr	Leu	Thr	Leu	Ser	Glu	Ser	Thr	Met	Asn	Thr	Leu	Lys	Cys		
	610					615					620						
Thr	Val	Gly	Pro	Ala	Met	Asn	Lys	His	Phe	Asn	Met	Ser	Ile	Ile	Ile		
625				630						635					640		
Ser	Asn	Gly	His	Gly	Thr	Thr	Gln	Tyr	Ser	Thr	Phe	Ser	Tyr	Val	Asp		
			645						650					655			
Pro	Val	Ile	Thr	Ser	Ile	Ser	Pro	Lys	Tyr	Gly	Pro	Met	Ala	Gly	Gly		
		660						665					670				
Thr	Leu	Leu	Thr	Leu	Thr	Gly	Asn	Tyr	Leu	Asn	Ser	Gly	Asn	Ser	Arg		
	675					680						685					
His	Ile	Ser	Ile	Gly	Gly	Lys	Thr	Cys	Thr	Leu	Lys	Ser	Val	Ser	Asn		
	690					695					700						
Ser	Ile	Leu	Glu	Cys	Tyr	Thr	Pro	Ala	Gln	Thr	Ile	Ser	Thr	Glu	Phe		
705				710						715					720		
Ala	Val	Lys	Leu	Lys	Ile	Asp	Leu	Ala	Asn	Arg	Glu	Thr	Ser	Ile	Phe		
			725						730					735			
Ser	Tyr	Arg	Glu	Asp	Pro	Ile	Val	Tyr	Glu	Ile	His	Pro	Thr	Lys	Ser		
		740						745					750				
Phe	Ile	Ser	Thr	Trp	Trp	Lys	Glu	Pro	Leu	Asn	Ile	Val	Ser	Phe	Leu		
	755					760						765					
Phe	Cys	Phe	Ala	Ser	Gly	Gly	Ser	Thr	Ile	Thr	Gly	Val	Gly	Lys	Asn		
	770					775					780						
Leu	Asn	Ser	Val	Ser	Val	Pro	Arg	Met	Val	Ile	Asn	Val	His	Glu	Ala		
785				790						795					800		
Gly	Arg	Asn	Phe	Thr	Val	Ala	Cys	Gln	His	Arg	Ser	Asn	Ser	Glu	Ile		
			805						810					815			
Ile	Cys	Cys	Thr	Thr	Pro	Ser	Leu	Gln	Gln	Leu	Asn	Leu	Gln	Leu	Pro		
			820					825					830				
Leu	Lys	Thr	Lys	Ala	Phe	Phe	Met	Leu	Asp	Gly	Ile	Leu	Ser	Lys	Tyr		
	835						840					845					
Phe	Asp	Leu	Ile	Tyr	Val	His	Asn	Pro	Val	Phe	Lys	Pro	Phe	Glu	Lys		
	850					855					860						
Pro	Val	Met	Ile	Ser	Met	Gly	Asn	Glu	Asn	Val	Leu	Glu	Ile	Lys	Gly		
865					870					875					880		
Asn	Asp	Ile	Asp	Pro	Glu	Ala	Val	Lys	Gly	Glu	Val	Leu	Lys	Val	Gly		
			885						890					895			
Asn	Lys	Ser	Cys	Glu	Asn	Ile	His	Leu	His	Ser	Glu	Ala	Val	Leu	Cys		
		900						905					910				
Thr	Val	Pro	Asn	Asp	Leu	Leu	Lys	Leu	Asn	Ser	Glu	Leu	Asn	Ile	Glu		
	915						920					925					
Trp	Lys	Gln	Ala	Ile	Ser	Ser	Thr	Val	Leu	Gly	Lys	Val	Ile	Val	Gln		

930	935	940
Pro Asp Gln Asn Phe Thr Gly Leu Ile Ala Gly Val Val Ser Ile Ser		
945	950	955
Thr Ala Leu Leu Leu Leu Leu Gly Phe Phe Leu Trp Leu Lys Lys Arg		
	965	970
Lys Gln Ile Lys Asp Leu Gly Ser Glu Leu Val Arg Tyr Asp Ala Arg		
	980	985
Val His Thr Pro His Leu Asp Arg Leu Val Ser Ala Arg Ser Val Ser		
	995	1000
Pro Thr Thr Glu Met Val Ser Asn Glu Ser Val Asp Tyr Arg Ala Thr		
	1010	1015
Phe Pro Glu Asp Gln Phe Pro Asn Ser Ser Gln Asn Gly Ser Cys Arg		
1025	1030	1035
Gln Val Gln Tyr Pro Leu Thr Asp Met Ser Pro Ile Leu Thr Ser Gly		
	1045	1050
Asp Ser Asp Ile Ser Ser Pro Leu Leu Gln Asn Thr Val His Ile Asp		
	1060	1065
Leu Ser Ala Leu Asn Pro Glu Leu Val Gln Ala Val Gln His Val Val		
	1075	1080
Ile Gly Pro Ser Ser Leu Ile Val His Phe Asn Glu Val Ile Gly Arg		
	1090	1095
Gly His Phe Gly Cys Val Tyr His Gly Thr Leu Leu Asp Asn Asp Gly		
1105	1110	1115
Lys Lys Ile His Cys Ala Val Lys Ser Leu Asn Arg Ile Thr Asp Ile		
	1125	1130
Gly Glu Val Ser Gln Phe Leu Thr Glu Gly Ile Ile Met Lys Asp Phe		
	1140	1145
Ser His Pro Asn Val Leu Ser Leu Leu Gly Ile Cys Leu Arg Ser Glu		
	1155	1160
Gly Ser Pro Leu Val Val Leu Pro Tyr Met Lys His Gly Asp Leu Arg		
	1170	1175
Asn Phe Ile Arg Asn Glu Thr His Asn Pro Thr Val Lys Asp Leu Ile		
1185	1190	1195
Gly Phe Gly Leu Gln Val Ala Lys Ala Met Lys Tyr Leu Ala Ser Lys		
	1205	1210
Lys Phe Val His Arg Asp Leu Ala Ala Arg Asn Cys Met Leu Asp Glu		
	1220	1225
Lys Phe Thr Val Lys Val Ala Asp Phe Gly Leu Ala Arg Asp Met Tyr		
	1235	1240
Asp Lys Glu Tyr Tyr Ser Val His Asn Lys Thr Gly Ala Lys Leu Pro		
	1250	1255
Val Lys Trp Met Ala Leu Glu Ser Leu Gln Thr Gln Lys Phe Thr Thr		
1265	1270	1275
Lys Ser Asp Val Trp Ser Phe Gly Val Val Leu Trp Glu Leu Met Thr		
	1285	1290
Arg Gly Ala Pro Pro Tyr Pro Asp Val Asn Thr Phe Asp Ile Thr Val		
	1300	1305
Tyr Leu Leu Gln Gly Arg Arg Leu Leu Gln Pro Glu Tyr Cys Pro Asp		
	1315	1320
Pro Leu Tyr Glu Val Met Leu Lys Cys Trp His Pro Lys Ala Glu Met		
	1330	1335
Arg Pro Ser Phe Ser Glu Leu Val Ser Arg Ile Ser Ala Ile Phe Ser		
1345	1350	1355
Thr Phe Ile Gly Glu His Tyr Val His Val Asn Ala Thr Tyr Val Asn		

				1365						1370					1375
Val	Lys	Cys	Val	Ala	Pro	Tyr	Pro	Ser	Leu	Leu	Ser	Ser	Glu	Asp	Asn
			1380					1385					1390		
Ala	Asp	Asp	Glu	Val	Asp	Thr	Arg	Pro	Ala	Ser	Phe	Trp	Glu	Thr	Ser
		1395					1400					1405			

<210> 6
 <211> 1408
 <212> PRT
 <213> Homo sapiens

<400> 6

Met	Lys	Ala	Pro	Ala	Val	Leu	Ala	Pro	Gly	Ile	Leu	Val	Leu	Leu	Phe
1				5					10				15		
Thr	Leu	Val	Gln	Arg	Ser	Asn	Gly	Glu	Cys	Lys	Glu	Ala	Leu	Ala	Lys
			20					25				30			
Ser	Glu	Met	Asn	Val	Asn	Met	Lys	Tyr	Gln	Leu	Pro	Asn	Phe	Thr	Ala
		35					40					45			
Glu	Thr	Pro	Ile	Gln	Asn	Val	Ile	Leu	His	Glu	His	His	Ile	Phe	Leu
	50					55				60					
Gly	Ala	Thr	Asn	Tyr	Ile	Tyr	Val	Leu	Asn	Glu	Glu	Asp	Leu	Gln	Lys
65					70					75				80	
Val	Ala	Glu	Tyr	Lys	Thr	Gly	Pro	Val	Leu	Glu	His	Pro	Asp	Cys	Phe
				85					90					95	
Pro	Cys	Gln	Asp	Cys	Ser	Ser	Lys	Ala	Asn	Leu	Ser	Gly	Gly	Val	Trp
			100					105					110		
Lys	Asp	Asn	Ile	Asn	Met	Ala	Leu	Val	Val	Asp	Thr	Tyr	Tyr	Asp	Asp
		115					120					125			
Gln	Leu	Ile	Ser	Cys	Gly	Ser	Val	Asn	Arg	Gly	Thr	Cys	Gln	Arg	His
	130					135					140				
Val	Phe	Pro	His	Asn	His	Thr	Ala	Asp	Ile	Gln	Ser	Glu	Val	His	Cys
145					150					155					160
Ile	Phe	Ser	Pro	Gln	Ile	Glu	Glu	Pro	Ser	Gln	Cys	Pro	Asp	Cys	Val
				165					170					175	
Val	Ser	Ala	Leu	Gly	Ala	Lys	Val	Leu	Ser	Ser	Val	Lys	Asp	Arg	Phe
			180					185					190		
Ile	Asn	Phe	Phe	Val	Gly	Asn	Thr	Ile	Asn	Ser	Ser	Tyr	Phe	Pro	Asp
		195					200					205			
His	Pro	Leu	His	Ser	Ile	Ser	Val	Arg	Arg	Leu	Lys	Glu	Thr	Lys	Asp
		210				215						220			
Gly	Phe	Met	Phe	Leu	Thr	Asp	Gln	Ser	Tyr	Ile	Asp	Val	Leu	Pro	Glu
225					230					235					240
Phe	Arg	Asp	Ser	Tyr	Pro	Ile	Lys	Tyr	Val	His	Ala	Phe	Glu	Ser	Asn
				245					250					255	
Asn	Phe	Ile	Tyr	Phe	Leu	Thr	Val	Gln	Arg	Glu	Thr	Leu	Asp	Ala	Gln
			260					265					270		
Thr	Phe	His	Thr	Arg	Ile	Ile	Arg	Phe	Cys	Ser	Ile	Asn	Ser	Gly	Leu
		275					280						285		
His	Ser	Tyr	Met	Glu	Met	Pro	Leu	Glu	Cys	Ile	Leu	Thr	Glu	Lys	Arg
		290				295					300				
Lys	Lys	Arg	Ser	Thr	Lys	Lys	Glu	Val	Phe	Asn	Ile	Leu	Gln	Ala	Ala
305					310					315					320
Tyr	Val	Ser	Lys	Pro	Gly	Ala	Gln	Leu	Ala	Arg	Gln	Ile	Gly	Ala	Ser

				325					330					335	
Leu	Asn	Asp	Asp	Ile	Leu	Phe	Gly	Val	Phe	Ala	Gln	Ser	Lys	Pro	Asp
			340					345					350		
Ser	Ala	Glu	Pro	Met	Asp	Arg	Ser	Ala	Met	Cys	Ala	Phe	Pro	Ile	Lys
		355					360					365			
Tyr	Val	Asn	Asp	Phe	Phe	Asn	Lys	Ile	Val	Asn	Lys	Asn	Asn	Val	Arg
	370					375					380				
Cys	Leu	Gln	His	Phe	Tyr	Gly	Pro	Asn	His	Glu	His	Cys	Phe	Asn	Arg
385					390					395					400
Thr	Leu	Leu	Arg	Asn	Ser	Ser	Gly	Cys	Glu	Ala	Arg	Arg	Asp	Glu	Tyr
				405					410					415	
Arg	Thr	Glu	Phe	Thr	Thr	Ala	Leu	Gln	Arg	Val	Asp	Leu	Phe	Met	Gly
			420					425					430		
Gln	Phe	Ser	Glu	Val	Leu	Leu	Thr	Ser	Ile	Ser	Thr	Phe	Ile	Lys	Gly
		435					440					445			
Asp	Leu	Thr	Ile	Ala	Asn	Leu	Gly	Thr	Ser	Glu	Gly	Arg	Phe	Met	Gln
	450					455					460				
Val	Val	Val	Ser	Arg	Ser	Gly	Pro	Ser	Thr	Pro	His	Val	Asn	Phe	Leu
465					470					475					480
Leu	Asp	Ser	His	Pro	Val	Ser	Pro	Glu	Val	Ile	Val	Glu	His	Thr	Leu
				485					490					495	
Asn	Gln	Asn	Gly	Tyr	Thr	Leu	Val	Ile	Thr	Gly	Lys	Lys	Ile	Thr	Lys
			500					505					510		
Ile	Pro	Leu	Asn	Gly	Leu	Gly	Cys	Arg	His	Phe	Gln	Ser	Cys	Ser	Gln
		515					520					525			
Cys	Leu	Ser	Ala	Pro	Pro	Phe	Val	Gln	Cys	Gly	Trp	Cys	His	Asp	Lys
	530					535					540				
Cys	Val	Arg	Ser	Glu	Glu	Cys	Leu	Ser	Gly	Thr	Trp	Thr	Gln	Gln	Ile
545					550					555					560
Cys	Leu	Pro	Ala	Ile	Tyr	Lys	Val	Phe	Pro	Asn	Ser	Ala	Pro	Leu	Glu
				565				570						575	
Gly	Gly	Thr	Arg	Leu	Thr	Ile	Cys	Gly	Trp	Asp	Phe	Gly	Phe	Arg	Arg
			580					585					590		
Asn	Asn	Lys	Phe	Asp	Leu	Lys	Lys	Thr	Arg	Val	Leu	Leu	Gly	Asn	Glu
		595					600					605			
Ser	Cys	Thr	Leu	Thr	Leu	Ser	Glu	Ser	Thr	Met	Asn	Thr	Leu	Lys	Cys
		610				615					620				
Thr	Val	Gly	Pro	Ala	Met	Asn	Lys	His	Phe	Asn	Met	Ser	Ile	Ile	Ile
625					630					635					640
Ser	Asn	Gly	His	Gly	Thr	Thr	Gln	Tyr	Ser	Thr	Phe	Ser	Tyr	Val	Asp
				645						650				655	
Pro	Val	Ile	Thr	Ser	Ile	Ser	Pro	Lys	Tyr	Gly	Pro	Met	Ala	Gly	Gly
			660					665					670		
Thr	Leu	Leu	Thr	Leu	Thr	Gly	Asn	Tyr	Leu	Asn	Ser	Gly	Asn	Ser	Arg
		675													

					755					760					765				
Phe	Cys	Phe	Ala	Ser	Gly	Gly	Ser	Thr	Ile	Thr	Gly	Val	Gly	Lys	Asn				
	770					775					780								
Leu	Asn	Ser	Val	Ser	Val	Pro	Arg	Met	Val	Ile	Asn	Val	His	Glu	Ala				
785					790					795					800				
Gly	Arg	Asn	Phe	Thr	Val	Ala	Cys	Gln	His	Arg	Ser	Asn	Ser	Glu	Ile				
				805					810					815					
Ile	Cys	Cys	Thr	Thr	Pro	Ser	Leu	Gln	Gln	Leu	Asn	Leu	Gln	Leu	Pro				
			820					825					830						
Leu	Lys	Thr	Lys	Ala	Phe	Phe	Met	Leu	Asp	Gly	Ile	Leu	Ser	Lys	Tyr				
		835					840					845							
Phe	Asp	Leu	Ile	Tyr	Val	His	Asn	Pro	Val	Phe	Lys	Pro	Phe	Glu	Lys				
	850					855					860								
Pro	Val	Met	Ile	Ser	Met	Gly	Asn	Glu	Asn	Val	Leu	Glu	Ile	Lys	Gly				
865					870					875					880				
Asn	Asp	Ile	Asp	Pro	Glu	Ala	Val	Lys	Gly	Glu	Val	Leu	Lys	Val	Gly				
				885					890					895					
Asn	Lys	Ser	Cys	Glu	Asn	Ile	His	Leu	His	Ser	Glu	Ala	Val	Leu	Cys				
			900					905					910						
Thr	Val	Pro	Asn	Asp	Leu	Leu	Lys	Leu	Asn	Ser	Glu	Leu	Asn	Ile	Glu				
		915					920					925							
Trp	Lys	Gln	Ala	Ile	Ser	Ser	Thr	Val	Leu	Gly	Lys	Val	Ile	Val	Gln				
	930					935					940								
Pro	Asp	Gln	Asn	Phe	Thr	Gly	Leu	Ile	Ala	Gly	Val	Val	Ser	Ile	Ser				
945					950					955					960				
Thr	Ala	Leu	Leu	Leu	Leu	Leu	Gly	Phe	Phe	Leu	Trp	Leu	Lys	Lys	Arg				
				965					970					975					
Lys	Gln	Ile	Lys	Asp	Leu	Gly	Ser	Glu	Leu	Val	Arg	Tyr	Asp	Ala	Arg				
			980					985					990						
Val	His	Thr	Pro	His	Leu	Asp	Arg	Leu	Val	Ser	Ala	Arg	Ser	Val	Ser				
		995					1000					1005							
Pro	Thr	Thr	Glu	Met	Val	Ser	Asn	Glu	Ser	Val	Asp	Tyr	Arg	Ala	Thr				
	1010					1015					1020								
Phe	Pro	Glu	Asp	Gln	Phe	Pro	Asn	Ser	Ser	Gln	Asn	Gly	Ser	Cys	Arg				
1025					1030					1035					1040				
Gln	Val	Gln	Tyr	Pro	Leu	Thr	Asp	Met	Ser	Pro	Ile	Leu	Thr	Ser	Gly				
				1045						1050				1055					
Asp	Ser	Asp	Ile	Ser	Ser	Pro	Leu	Leu	Gln	Asn	Thr	Val	His	Ile	Asp				
			1060					1065					1070						
Leu	Ser	Ala	Leu	Asn	Pro	Glu	Leu	Val	Gln	Ala	Val	Gln	His	Val	Val				
		1075					1080					1085							
Ile	Gly	Pro	Ser	Ser	Leu	Ile	Val	His	Phe	Asn	Glu	Val	Ile	Gly	Arg				
	1090					1095					110								


```

1185          1190          1195          1200
Gly Phe Gly Leu Gln Val Ala Lys Ala Met Lys Tyr Leu Ala Ser Lys
          1205          1210          1215
Lys Phe Val His Arg Asp Leu Ala Ala Arg Asn Cys Met Leu Asp Glu
          1220          1225          1230
Lys Phe Thr Val Lys Val Ala Asp Phe Gly Leu Ala Arg Asp Met Tyr
          1235          1240          1245
Asp Lys Glu Tyr Tyr Ser Val His Asn Lys Thr Gly Ala Lys Leu Pro
          1250          1255          1260
Val Lys Trp Met Ala Leu Glu Ser Leu Gln Thr Gln Lys Phe Thr Thr
1265          1270          1275          1280
Lys Ser Asp Val Trp Ser Phe Gly Val Val Leu Trp Glu Leu Met Thr
          1285          1290          1295
Arg Gly Ala Pro Pro Tyr Pro Asp Val Asn Thr Phe Asp Ile Thr Val
          1300          1305          1310
Tyr Leu Leu Gln Gly Arg Arg Leu Leu Gln Pro Glu Tyr Cys Pro Asp
          1315          1320          1325
Pro Leu Tyr Glu Val Met Leu Lys Cys Trp His Pro Lys Ala Glu Met
          1330          1335          1340
Arg Pro Ser Phe Ser Glu Leu Val Ser Arg Ile Ser Ala Ile Phe Ser
1345          1350          1355          1360
Thr Phe Ile Gly Glu His Tyr Val His Val Asn Ala Thr Tyr Val Asn
          1365          1370          1375
Val Lys Cys Val Ala Pro Tyr Pro Ser Leu Leu Ser Ser Glu Asp Asn
          1380          1385          1390
Ala Asp Asp Glu Val Asp Thr Arg Pro Ala Ser Phe Trp Glu Thr Ser
          1395          1400          1405

```

```

<210> 7
<211> 979
<212> PRT
<213> Artificial Sequence

```

```

<220>
<223> CSF-MET fusion protein.

```

```

<400> 7
Met Gly Pro Gly Val Leu Leu Leu Leu Leu Val Ala Thr Ala Trp His
 1          5          10          15
Gly Gln Gly Ile Pro Val Ile Glu Pro Ser Val Pro Glu Leu Val Val
          20          25          30
Lys Pro Gly Ala Thr Val Thr Leu Arg Cys Val Gly Asn Gly Ser Val
          35          40          45
Glu Trp Asp Gly Pro Pro Ser Pro His Trp Thr Leu Tyr Ser Asp Gly
          50          55          60
Ser Ser Ser Ile Leu Ser Thr Asn Asn Ala Thr Phe Gln Asn Thr Gly
65          70          75          80
Thr Tyr Arg Cys Thr Glu Pro Gly Asp Pro Leu Gly Gly Ser Ala Ala
          85          90          95
Ile His Leu Tyr Val Lys Asp Pro Ala Arg Pro Trp Asn Val Leu Ala
          100          105          110
Gln Glu Val Val Val Phe Glu Asp Gln Asp Ala Leu Leu Pro Cys Leu
          115          120          125

```

Leu 130	Thr	Asp	Pro	Val	Leu	Glu 135	Ala	Gly	Val	Ser	Leu 140	Val	Arg	Val	Arg
Gly 145	Arg	Pro	Leu	Met	Arg	His 150	Thr	Asn	Tyr	Ser 155	Phe	Ser	Pro	Trp	His 160
Gly	Phe	Thr	Ile	His 165	Arg	Ala	Lys	Phe	Ile 170	Gln	Ser	Gln	Asp	Tyr	Gln 175
Cys	Ser	Ala	Leu	Met 180	Gly	Gly	Arg	Lys 185	Val	Met	Ser	Ile	Ser	Ile	Arg
Leu	Lys	Val	Gln	Lys 195	Val	Ile	Pro	Gly 200	Pro	Pro	Ala	Leu	Thr	Leu	Val
Pro	Ala	Glu	Leu	Val 210	Arg	Ile 215	Arg	Gly	Glu	Ala	Ala 220	Gln	Ile	Val	Cys
Ser 225	Ala	Ser	Ser	Val 230	Asp	Val	Asn	Phe	Asp	Val 235	Phe	Leu	Gln	His	Asn 240
Asn	Thr	Lys	Leu	Ala 245	Ile	Pro	Gln	Gln	Ser 250	Asp	Phe	His	Asn	Asn	Arg 255
Tyr	Gln	Lys	Val 260	Leu	Thr	Leu	Asn	Leu 265	Asp	Gln	Val	Asp	Phe	Gln	His
Ala	Gly	Asn	Tyr 275	Ser	Cys	Val	Ala	Ser 280	Asn	Val	Gln	Gly 285	Lys	His	Ser
Thr	Ser	Met	Phe 290	Phe	Arg	Val 295	Val	Glu	Ser	Ala	Tyr 300	Leu	Asn	Leu	Ser
Ser 305	Glu	Gln	Asn	Leu 310	Ile	Gln	Glu	Val	Thr	Val 315	Gly	Glu	Gly	Leu	Asn 320
Leu	Lys	Val	Met 325	Val	Glu	Ala	Tyr	Pro	Gly 330	Leu	Gln	Gly	Phe	Asn	Trp 335
Thr	Tyr	Leu	Gly 340	Pro	Phe	Ser	Asp	His 345	Gln	Pro	Glu	Pro	Lys	Leu	Ala
Asn	Ala	Thr 355	Thr	Lys	Asp	Thr	Tyr 360	Arg	His	Thr	Phe	Thr 365	Leu	Ser	Leu
Pro	Arg 370	Leu	Lys	Pro	Ser 375	Glu	Ala	Gly	Arg	Tyr	Ser 380	Phe	Leu	Ala	Arg
Asn 385	Pro	Gly	Gly	Trp 390	Arg	Ala	Leu	Thr	Phe	Glu 395	Leu	Thr	Leu	Arg	Tyr 400
Pro	Pro	Glu	Val 405	Ser	Val	Ile	Trp	Thr	Phe 410	Ile	Asn	Gly	Ser	Gly	Thr 415
Leu	Leu	Cys	Ala 420	Ala	Ser	Gly	Tyr	Pro 425	Gln	Pro	Asn	Val	Thr	Trp	Leu
Gln	Cys	Ser	Gly 435	His	Thr	Asp	Arg 440	Cys	Asp	Glu	Ala	Gln 445	Val	Leu	Gln
Val	Trp 450	Asp	Asp	Pro	Tyr	Pro 455	Glu	Val	Leu	Ser	Gln 460	Glu	Pro	Phe	His
Lys 465	Val	Thr	Val	Gln 470	Ser	Leu	Leu	Thr	Val	Glu 475	Thr	Leu	Glu	His	Asn 480
Gln	Thr	Tyr	Glu 485	Cys	Arg	Ala	His	Asn	Ser 490	Val	Gly	Ser	Gly	Ser	Trp
Ala	Phe	Ile	Pro 500	Ile	Ser	Ala	Gly	Ala 505	His	Thr	Asp	Leu	Gly	Lys	Val
Ile	Val	Gln 515	Pro	Asp	Gln	Asn	Phe 520	Thr	Gly	Leu	Ile	Ala 525	Gly	Val	Val
Ser	Ile 530	Ser	Thr	Ala	Leu	Leu 535	Leu	Leu	Leu	Gly	Phe 540	Phe	Leu	Trp	Leu
Lys 545	Lys	Arg	Lys	Gln 550	Ile	Lys	Asp	Leu	Gly	Ser 555	Glu	Leu	Val	Arg	Tyr 560

[illegible]

<210> 8
 <211> 939
 <212> PRT
 <213> Homo sapiens

<400> 8
 Met Asp Asp Ser Glu Val Glu Ser Thr Ala Ser Ile Leu Ala Ser Val
 1 5 10 15
 Lys Glu Gln Glu Ala Gln Phe Glu Lys Leu Thr Arg Ala Leu Glu Glu
 20 25 30
 Glu Arg Arg His Val Ser Ala Gln Leu Glu Arg Val Arg Val Ser Pro
 35 40 45
 Gln Asp Ala Asn Pro Leu Met Ala Asn Gly Thr Leu Thr Arg Arg His
 50 55 60
 Gln Asn Gly Arg Phe Val Gly Asp Ala Asp Leu Glu Arg Gln Lys Phe
 65 70 75 80
 Ser Asp Leu Lys Leu Asn Gly Pro Gln Asp His Ser His Leu Leu Tyr
 85 90 95
 Ser Thr Ile Pro Arg Met Gln Glu Pro Gly Gln Ile Val Glu Thr Tyr
 100 105 110
 Thr Glu Glu Asp Pro Glu Gly Ala Met Ser Val Val Ser Val Glu Thr
 115 120 125
 Ser Asp Asp Gly Thr Thr Arg Arg Thr Glu Thr Thr Val Lys Lys Val
 130 135 140
 Val Lys Thr Val Thr Thr Arg Thr Val Gln Pro Val Ala Met Gly Pro
 145 150 155 160
 Asp Gly Leu Pro Val Asp Ala Ser Ser Val Ser Asn Asn Tyr Ile Gln
 165 170 175
 Thr Leu Gly Arg Asp Phe Arg Lys Asn Gly Asn Gly Gly Pro Gly Pro
 180 185 190
 Tyr Val Gly Gln Ala Gly Thr Ala Thr Leu Pro Arg Asn Phe His Tyr
 195 200 205
 Pro Pro Asp Gly Tyr Ser Arg His Tyr Glu Asp Gly Tyr Pro Gly Gly
 210 215 220
 Ser Asp Asn Tyr Gly Ser Leu Ser Arg Val Thr Arg Ile Glu Glu Arg
 225 230 235 240
 Tyr Arg Pro Ser Met Glu Gly Tyr Arg Ala Pro Ser Arg Gln Asp Val
 245 250 255
 Tyr Gly Pro Gln Pro Gln Val Arg Val Gly Gly Ser Ser Val Asp Leu
 260 265 270
 His Arg Phe His Pro Glu Pro Tyr Gly Leu Glu Asp Asp Gln Arg Ser
 275 280 285
 Met Gly Tyr Asp Asp Leu Asp Tyr Gly Met Met Ser Asp Tyr Gly Thr
 290 295 300
 Ala Arg Arg Thr Gly Thr Pro Ser Asp Pro Arg Arg Arg Leu Arg Ser
 305 310 315 320
 Tyr Glu Asp Met Ile Gly Glu Glu Val Pro Ser Asp Gln Tyr Tyr Trp
 325 330 335
 Ala Pro Leu Ala Gln His Glu Arg Gly Ser Leu Ala Ser Leu Asp Ser
 340 345 350
 Leu Arg Lys Gly Gly Pro Pro Pro Pro Asn Trp Arg Gln Pro Glu Leu
 355 360 365

Pro	Glu	Val	Ile	Ala	Met	Leu	Gly	Phe	Arg	Leu	Asp	Ala	Val	Lys	Ser	370	375	380
Asn	Ala	Ala	Ala	Tyr	Leu	Gln	His	Leu	Cys	Tyr	Arg	Asn	Asp	Lys	Val	385	390	395
Lys	Thr	Asp	Val	Arg	Lys	Leu	Lys	Gly	Ile	Pro	Val	Leu	Val	Gly	Leu	405	410	415
Leu	Asp	His	Pro	Lys	Lys	Glu	Val	His	Leu	Gly	Ala	Cys	Gly	Ala	Leu	420	425	430
Lys	Asn	Ile	Ser	Phe	Gly	Arg	Asp	Gln	Asp	Asn	Lys	Ile	Ala	Ile	Lys	435	440	445
Asn	Cys	Asp	Gly	Val	Pro	Ala	Leu	Val	Arg	Leu	Leu	Arg	Lys	Ala	Arg	450	455	460
Asp	Met	Asp	Leu	Thr	Glu	Val	Ile	Thr	Gly	Thr	Leu	Trp	Asn	Leu	Ser	465	470	475
Ser	His	Asp	Ser	Ile	Lys	Met	Glu	Ile	Val	Asp	His	Ala	Leu	His	Ala	485	490	495
Leu	Thr	Asp	Glu	Val	Ile	Ile	Pro	His	Ser	Gly	Trp	Glu	Arg	Glu	Pro	500	505	510
Asn	Glu	Asp	Cys	Lys	Pro	Arg	His	Ile	Glu	Trp	Glu	Ser	Val	Leu	Thr	515	520	525
Asn	Thr	Ala	Gly	Cys	Leu	Arg	Asn	Val	Ser	Ser	Glu	Arg	Ser	Glu	Ala	530	535	540
Arg	Arg	Lys	Leu	Arg	Glu	Cys	Asp	Gly	Leu	Val	Asp	Ala	Leu	Ile	Phe	545	550	555
Ile	Val	Gln	Ala	Glu	Ile	Gly	Gln	Lys	Asp	Ser	Asp	Ser	Lys	Leu	Val	565	570	575
Glu	Asn	Cys	Val	Cys	Leu	Leu	Arg	Asn	Leu	Ser	Tyr	Gln	Val	His	Arg	580	585	590
Glu	Ile	Pro	Gln	Ala	Glu	Arg	Tyr	Gln	Glu	Ala	Ala	Pro	Asn	Val	Ala	595	600	605
Asn	Asn	Thr	Gly	Pro	His	Ala	Ala	Ser	Cys	Phe	Gly	Ala	Lys	Lys	Gly	610	615	620
Lys	Asp	Glu	Trp	Phe	Ser	Arg	Gly	Lys	Lys	Pro	Ile	Glu	Asp	Pro	Ala	625	630	635
Asn	Asp	Thr	Val	Asp	Phe	Pro	Lys	Arg	Thr	Ser	Pro	Ala	Arg	Gly	Tyr	645	650	655
Glu	Leu	Leu	Phe	Gln	Pro	Glu	Val	Val	Arg	Ile	Tyr	Ile	Ser	Leu	Leu	660	665	670
Lys	Glu	Ser	Lys	Thr	Pro	Ala	Ile	Leu	Glu	Ala	Ser	Ala	Gly	Ala	Ile	675	680	685
Gln	Asn	Leu	Cys	Ala	Gly	Arg	Trp	Thr	Tyr	Gly	Arg	Tyr	Ile	Arg	Ser	690	695	700
Ala	Leu	Arg	Gln	Glu	Lys	Ala	Leu	Ser	Ala	Ile	Ala	Asp	Leu	Leu	Thr	705	710	715
Asn	Glu	His	Glu	Arg	Val	Val	Lys	Ala	Ala	Ser	Gly	Ala	Leu	Arg	Asn	725	730	735
Leu	Ala	Val	Asp	Ala	Arg	Asn	Lys	Glu	Leu	Ile	Gly	Lys	His	Ala	Ile	740	745	750
Pro	Asn	Leu	Val	Lys	Asn	Leu	Pro	Gly	Gly	Gln	Gln	Asn	Ser	Ser	Trp	755	760	765
Asn	Phe	Ser	Glu	Asp	Thr	Val	Ile	Ser	Ile	Leu	Asn	Thr	Ile	Asn	Glu	770	775	780
Val	Ile	Ala	Glu	Asn	Leu	Glu	Ala	Ala	Lys	Lys	Leu	Arg	Glu	Thr	Gln	785	790	795
																		800

Gly	Ile	Glu	Lys	Leu	Val	Leu	Ile	Asn	Lys	Ser	Gly	Asn	Arg	Ser	Glu		
				805					810					815			
Lys	Glu	Val	Arg	Ala	Ala	Ala	Leu	Val	Leu	Gln	Thr	Ile	Trp	Gly	Tyr		
				820					825					830			
Lys	Glu	Leu	Arg	Lys	Pro	Leu	Glu	Lys	Glu	Gly	Trp	Lys	Lys	Ser	Asp		
				835					840					845			
Phe	Gln	Val	Asn	Leu	Asn	Asn	Ala	Ser	Arg	Ser	Gln	Ser	Ser	His	Ser		
				850					855					860			
Tyr	Asp	Asp	Ser	Thr	Leu	Pro	Leu	Ile	Asp	Arg	Asn	Gln	Lys	Ser	Asp		
865					870					875					880		
Lys	Lys	Pro	Asp	Arg	Glu	Glu	Ile	Gln	Met	Ser	Asn	Met	Gly	Ser	Asn		
				885					890					895			
Thr	Lys	Ser	Leu	Asp	Asn	Asn	Tyr	Ser	Thr	Pro	Asn	Glu	Arg	Gly	Asp		
				900					905					910			
His	Asn	Arg	Thr	Leu	Asp	Arg	Ser	Gly	Asp	Leu	Gly	Asp	Met	Glu	Pro		
				915					920					925			
Leu	Lys	Gly	Thr	Thr	Pro	Leu	Met	Gln	Lys	Ile							
				930					935								

```
<210> 9
<211> 941
<212> PRT
<213> Homo sapiens
```

<400>	9														
Met	Asp	Asp	Ser	Glu	Val	Glu	Ser	Thr	Ala	Ser	Ile	Leu	Ala	Ser	Val
1				5					10					15	
Lys	Glu	Gln	Glu	Ala	Gln	Phe	Glu	Lys	Leu	Thr	Arg	Ala	Leu	Glu	Glu
			20					25					30		
Glu	Arg	Arg	His	Val	Ser	Ala	Gln	Leu	Glu	Arg	Val	Arg	Val	Ser	Pro
			35					40					45		
Gln	Asp	Ala	Asn	Pro	Leu	Met	Ala	Asn	Gly	Thr	Leu	Thr	Arg	Arg	His
	50					55					60				
Gln	Asn	Gly	Arg	Phe	Val	Gly	Asp	Ala	Asp	Leu	Glu	Arg	Gln	Lys	Phe
65					70					75					80
Ser	Asp	Leu	Lys	Leu	Asn	Gly	Pro	Gln	Asp	His	Ser	His	Leu	Leu	Tyr
				85					90					95	
Ser	Thr	Ile	Pro	Arg	Met	Gln	Glu	Pro	Gly	Gln	Ile	Val	Glu	Thr	Tyr
			100					105					110		
Thr	Glu	Glu	Asp	Pro	Glu	Gly	Ala	Met	Ser	Val	Val	Ser	Val	Glu	Thr
			115				120						125		
Ser	Asp	Asp	Gly	Thr	Thr	Arg	Arg	Thr	Glu	Thr	Thr	Val	Lys	Lys	Val
	130					135					140				
Val	Lys	Thr	Val	Thr	Thr	Arg	Thr	Val	Gln	Pro	Val	Ala	Met	Gly	Pro
145					150					155					160
Asp	Gly	Leu	Pro	Val	Asp	Ala	Ser	Ser	Val	Ser	Asn	Asn	Tyr	Ile	Gln
				165					170					175	
Thr	Leu	Gly	Arg	Asp	Phe	Arg	Lys	Asn	Gly	Asn	Gly	Gly	Pro	Gly	Pro
			180				185						190		
Tyr	Val	Gly	Gln	Ala	Gly	Thr	Ala	Thr	Leu	Pro	Arg	Asn	Phe	His	Tyr
		195					200					205			
Pro	Pro	Asp	Gly	Tyr	Ser	Arg	His	Tyr	Glu	Asp	Gly	Tyr	Pro	Gly	Gly
	210					215					220				

Ser	Asp	Asn	Tyr	Gly	Ser	Leu	Ser	Arg	Val	Thr	Arg	Ile	Glu	Glu	Arg
225					230					235					240
Tyr	Arg	Pro	Ser	Met	Glu	Gly	Tyr	Arg	Ala	Pro	Ser	Arg	Gln	Asp	Val
				245					250					255	
Tyr	Gly	Pro	Gln	Pro	Gln	Val	Arg	Val	Gly	Gly	Ser	Ser	Val	Asp	Leu
			260					265					270		
His	Arg	Phe	His	Pro	Glu	Pro	Tyr	Gly	Leu	Glu	Asp	Asp	Gln	Arg	Ser
		275					280					285			
Met	Gly	Tyr	Asp	Asp	Leu	Asp	Tyr	Gly	Met	Met	Ser	Asp	Tyr	Gly	Thr
	290					295					300				
Ala	Arg	Arg	Thr	Gly	Thr	Pro	Ser	Asp	Pro	Arg	Arg	Arg	Leu	Arg	Ser
305					310					315					320
Tyr	Glu	Asp	Met	Ile	Gly	Glu	Glu	Val	Pro	Ser	Asp	Gln	Tyr	Tyr	Trp
				325					330					335	
Ala	Pro	Leu	Ala	Gln	His	Glu	Arg	Gly	Ser	Leu	Ala	Ser	Leu	Asp	Ser
			340					345					350		
Leu	Arg	Lys	Gly	Gly	Pro	Pro	Pro	Pro	Asn	Trp	Arg	Gln	Pro	Glu	Leu
		355					360					365			
Pro	Glu	Val	Ile	Ala	Met	Leu	Gly	Phe	Arg	Leu	Asp	Ala	Val	Lys	Ser
	370					375					380				
Asn	Ala	Ala	Ala	Tyr	Leu	Gln	His	Leu	Cys	Tyr	Arg	Asn	Asp	Lys	Val
385					390					395					400
Lys	Thr	Asp	Val	Arg	Lys	Leu	Lys	Gly	Ile	Pro	Val	Leu	Val	Gly	Leu
				405					410					415	
Leu	Asp	His	Pro	Lys	Lys	Glu	Val	His	Leu	Gly	Ala	Cys	Gly	Ala	Leu
		420						425					430		
Lys	Asn	Ile	Ser	Phe	Gly	Arg	Asp	Gln	Asp	Asn	Lys	Ile	Ala	Ile	Lys
	435						440					445			
Asn	Cys	Asp	Gly	Val	Pro	Ala	Leu	Val	Arg	Leu	Leu	Arg	Lys	Ala	Arg
	450					455					460				
Asp	Met	Asp	Leu	Thr	Glu	Val	Ile	Thr	Gly	Thr	Leu	Trp	Asn	Leu	Ser
465					470					475					480
Ser	His	Asp	Ser	Ile	Lys	Met	Glu	Ile	Val	Asp	His	Ala	Leu	His	Ala
				485					490					495	
Leu	Thr	Asp	Glu	Val	Ile	Ile	Pro	His	Ser	Gly	Trp	Glu	Arg	Glu	Pro
			500					505					510		
Asn	Glu	Asp	Cys	Lys	Pro	Arg	His	Ile	Glu	Trp	Glu	Ser	Val	Leu	Thr
		515					520					525			
Asn	Thr	Ala	Gly	Cys	Leu	Arg	Asn	Val	Ser	Ser	Glu	Arg	Ser	Glu	Ala
	530					535					540				
Arg	Arg	Lys	Leu	Arg	Glu	Cys	Asp	Gly	Leu	Val	Asp	Ala	Leu	Ile	Phe
545					550					555					560
Ile	Val	Gln	Ala	Glu	Ile	Gly	Gln	Lys	Asp	Ser	Asp	Ser	Lys	Leu	Val
				565					570					575	
Glu	Asn	Cys	Val	Cys	Leu	Leu	Arg	Asn	Leu	Ser	Tyr	Gln	Val	His	Arg
		580						585					590		
Glu	Ile	Pro	Gln	Ala	Glu	Arg	Tyr	Gln	Glu	Ala	Ala	Pro	Asn	Val	Ala
		595					600					605			
Asn	Asn	Thr	Gly	Pro	His	Ala	Ala	Ser	Cys	Phe	Gly	Ala	Lys	Lys	Gly
	610					615					620				
Lys	Gly	Lys	Lys	Pro	Ile	Glu	Asp	Pro	Ala	Asn	Asp	Thr	Val	Asp	Phe
625					630					635					640
Pro	Lys	Arg	Thr	Ser	Pro	Ala	Arg	Gly	Tyr	Glu	Leu	Leu	Phe	Gln	Pro
				645					650					655	

Glu Val Val Arg Ile Tyr Ile Ser Leu Leu Lys Glu Ser Lys Thr Pro
 660 665 670
 Ala Ile Leu Glu Ala Ser Ala Gly Ala Ile Gln Asn Leu Cys Ala Gly
 675 680 685
 Arg Trp Thr Tyr Gly Arg Tyr Ile Arg Ser Ala Leu Arg Gln Glu Lys
 690 695 700
 Ala Leu Ser Ala Ile Ala Asp Leu Leu Thr Asn Glu His Glu Arg Val
 705 710 715 720
 Val Lys Ala Ala Ser Gly Ala Leu Arg Asn Leu Ala Val Asp Ala Arg
 725 730 735
 Asn Lys Glu Leu Ile Gly Lys His Ala Ile Pro Asn Leu Val Lys Asn
 740 745 750
 Leu Pro Gly Gly Gln Gln Asn Ser Ser Trp Asn Phe Ser Glu Asp Thr
 755 760 765
 Val Ile Ser Ile Leu Asn Thr Ile Asn Glu Val Ile Ala Glu Asn Leu
 770 775 780
 Glu Ala Ala Lys Lys Leu Arg Glu Thr Gln Gly Ile Glu Lys Leu Val
 785 790 795 800
 Leu Ile Asn Lys Ser Gly Asn Arg Ser Glu Lys Glu Val Arg Ala Ala
 805 810 815
 Ala Leu Val Leu Gln Thr Ile Trp Gly Tyr Lys Glu Leu Arg Lys Pro
 820 825 830
 Leu Glu Lys Glu Gly Trp Lys Lys Ser Asp Phe Gln Val Asn Leu Asn
 835 840 845
 Asn Ala Ser Arg Ser Gln Ser Ser His Ser Tyr Asp Asp Ser Thr Leu
 850 855 860
 Pro Leu Ile Asp Arg Asn Gln Lys Ser Asp Asn Asn Tyr Ser Thr Pro
 865 870 875 880
 Asn Glu Arg Gly Asp His Asn Arg Thr Leu Asp Arg Ser Gly Asp Leu
 885 890 895
 Gly Asp Met Glu Pro Leu Lys Gly Thr Pro Leu Met Gln Asp Glu
 900 905 910
 Gly Gln Glu Ser Leu Glu Glu Glu Leu Asp Val Leu Val Leu Asp Asp
 915 920 925
 Glu Gly Gly Gln Val Ser Tyr Pro Ser Met Gln Lys Ile
 930 935 940

<210> 10
 <211> 914
 <212> PRT
 <213> Homo sapiens

<400> 10
 Met Ala Asn Gly Thr Leu Thr Arg Arg His Gln Asn Gly Arg Phe Val
 1 5 10 15
 Gly Asp Ala Asp Leu Glu Arg Gln Lys Phe Ser Asp Leu Lys Leu Asn
 20 25 30
 Gly Pro Gln Asp His Ser His Leu Leu Tyr Ser Thr Ile Pro Arg Met
 35 40 45
 Gln Glu Pro Gly Gln Ile Val Glu Thr Tyr Thr Glu Glu Asp Pro Glu
 50 55 60
 Gly Ala Met Ser Val Val Ser Val Glu Thr Ser Asp Asp Gly Thr Thr
 65 70 75 80

Arg	Arg	Thr	Glu	Thr	Thr	Val	Lys	Lys	Val	Val	Lys	Thr	Val	Thr	Thr		
				85					90					95			
Arg	Thr	Val	Gln	Pro	Val	Ala	Met	Gly	Pro	Asp	Gly	Leu	Pro	Val	Asp		
			100					105					110				
Ala	Ser	Ser	Val	Ser	Asn	Asn	Tyr	Ile	Gln	Thr	Leu	Gly	Arg	Asp	Phe		
		115					120					125					
Arg	Lys	Asn	Gly	Asn	Gly	Gly	Pro	Gly	Pro	Tyr	Val	Gly	Gln	Ala	Gly		
	130					135					140						
Thr	Ala	Thr	Leu	Pro	Arg	Asn	Phe	His	Tyr	Pro	Pro	Asp	Gly	Tyr	Ser		
145					150					155					160		
Arg	His	Tyr	Glu	Asp	Gly	Tyr	Pro	Gly	Gly	Ser	Asp	Asn	Tyr	Gly	Ser		
			165						170					175			
Leu	Ser	Arg	Val	Thr	Arg	Ile	Glu	Glu	Arg	Tyr	Arg	Pro	Ser	Met	Glu		
		180						185					190				
Gly	Tyr	Arg	Ala	Pro	Ser	Arg	Gln	Asp	Val	Tyr	Gly	Pro	Gln	Pro	Gln		
	195						200					205					
Val	Arg	Val	Gly	Gly	Ser	Ser	Val	Asp	Leu	His	Arg	Phe	His	Pro	Glu		
	210					215					220						
Pro	Tyr	Gly	Leu	Glu	Asp	Asp	Gln	Arg	Ser	Met	Gly	Tyr	Asp	Asp	Leu		
225					230					235					240		
Asp	Tyr	Gly	Met	Met	Ser	Asp	Tyr	Gly	Thr	Ala	Arg	Arg	Thr	Gly	Thr		
			245						250					255			
Pro	Ser	Asp	Pro	Arg	Arg	Arg	Leu	Arg	Ser	Tyr	Glu	Asp	Met	Ile	Gly		
		260						265					270				
Glu	Glu	Val	Pro	Ser	Asp	Gln	Tyr	Tyr	Trp	Ala	Pro	Leu	Ala	Gln	His		
	275					280						285					
Glu	Arg	Gly	Ser	Leu	Ala	Ser	Leu	Asp	Ser	Leu	Arg	Lys	Gly	Gly	Pro		
	290					295					300						
Pro	Pro	Pro	Asn	Trp	Arg	Gln	Pro	Glu	Leu	Pro	Glu	Val	Ile	Ala	Met		
305					310					315					320		
Leu	Gly	Phe	Arg	Leu	Asp	Ala	Val	Lys	Ser	Asn	Ala	Ala	Ala	Tyr	Leu		
			325						330					335			
Gln	His	Leu	Cys	Tyr	Arg	Asn	Asp	Lys	Val	Lys	Thr	Asp	Val	Arg	Lys		
		340						345					350				
Leu	Lys	Gly	Ile	Pro	Val	Leu	Val	Gly	Leu	Leu	Asp	His	Pro	Lys	Lys		
	355						360					365					
Glu	Val	His	Leu	Gly	Ala	Cys	Gly	Ala	Leu	Lys	Asn	Ile	Ser	Phe	Gly		
	370					375					380						
Arg	Asp	Gln	Asp	Asn	Lys	Ile	Ala	Ile	Lys	Asn	Cys	Asp	Gly	Val	Pro		
385					390					395					400		
Ala	Leu	Val	Arg	Leu	Leu	Arg	Lys	Ala	Arg	Asp	Met	Asp	Leu	Thr	Glu		
			405						410					415			
Val	Ile	Thr	Gly	Thr	Leu	Trp	Asn	Leu	Ser	Ser	His	Asp	Ser	Ile	Lys		
	420						425						430				
Met	Glu	Ile	Val	Asp	His	Ala	Leu	His	Ala	Leu	Thr	Asp	Glu	Val	Ile		
	435						440					445					
Ile	Pro	His	Ser	Gly	Trp	Glu	Arg	Glu	Pro	Asn	Glu	Asp	Cys	Lys	Pro		
	450					455					460						
Arg	His	Ile	Glu	Trp	Glu	Ser	Val	Leu	Thr	Asn	Thr	Ala	Gly	Cys	Leu		
465					470					475					480		
Arg	Asn	Val	Ser	Ser	Glu	Arg	Ser	Glu	Ala	Arg	Arg	Lys	Leu	Arg	Glu		
			485						490					495			
Cys	Asp	Gly	Leu	Val	Asp	Ala	Leu	Ile	Phe	Ile	Val	Gln	Ala	Glu	Ile		
		500						505					510				

Gly 515	Gln 530	Lys 545	Asp 565	Ser 580	Asp 595	Ser 610	Lys 625	Leu 645	Val 660	Glu 675	Asn 690	Cys 705	Val 720	Cys 735	Leu 750
Leu 530	Arg 545	Asn 565	Leu 580	Ser 595	Tyr 610	Gln 625	Val 645	His 660	Arg 675	Ile 690	Pro 705	Thr 720	Gly 735	Ala 750	Glu 765
Arg 545	Tyr 565	Gln 580	Glu 595	Ala 610	Ala 625	Pro 645	Asn 660	Val 675	Ala 690	Asn 705	Asn 720	Thr 735	Gly 750	Pro 765	His 780
Ala 565	Ala 580	Ser 595	Cys 610	Phe 625	Gly 645	Ala 660	Lys 675	Lys 690	Gly 705	Lys 720	Asp 735	Glu 750	Trp 765	Phe 780	Ser 795
Arg 580	Gly 595	Lys 610	Lys 625	Pro 645	Ile 660	Glu 675	Asp 690	Pro 705	Ala 720	Asn 735	Asp 750	Thr 765	Val 780	Val 795	Phe 810
Pro 595	Lys 610	Arg 625	Thr 645	Ser 660	Pro 675	Ala 690	Arg 705	Gly 720	Tyr 735	Glu 750	Leu 765	Leu 780	Phe 795	Gln 810	Pro 825
Glu 610	Val 625	Val 645	Arg 660	Ile 675	Tyr 690	Ile 705	Ser 720	Leu 735	Leu 750	Lys 765	Glu 780	Ser 795	Lys 810	Thr 825	Pro 840
Ala 625	Ile 645	Leu 660	Glu 675	Ala 690	Ser 705	Ala 720	Gly 735	Ala 750	Ile 765	Gln 780	Asn 795	Leu 810	Cys 825	Ala 840	Gly 855
Arg 645	Trp 660	Thr 675	Tyr 690	Gly 705	Arg 720	Tyr 735	Ile 750	Arg 765	Ser 780	Ala 795	Leu 810	Arg 825	Gln 840	Glu 855	Lys 870
Ala 660	Leu 675	Ser 690	Ala 705	Ile 720	Ala 735	Asp 750	Leu 765	Leu 780	Thr 795	Asn 810	Glu 825	His 840	Glu 855	Arg 870	Val 885
Val 675	Lys 690	Ala 705	Ala 720	Ser 735	Gly 750	Ala 765	Leu 780	Arg 795	Asn 810	Leu 825	Ala 840	Val 855	Asp 870	Ala 885	Arg 900
Asn 690	Lys 705	Glu 720	Leu 735	Ile 750	Gly 765	Lys 780	His 795	Ala 810	Ile 825	Pro 840	Asn 855	Leu 870	Val 885	Lys 900	Asn 915
Leu 705	Pro 720	Gly 735	Gly 750	Gln 765	Gln 780	Asn 795	Ser 810	Ser 825	Trp 840	Asn 855	Phe 870	Ser 885	Glu 900	Asp 915	Thr 930
Val 720	Ile 735	Ser 750	Ile 765	Leu 780	Asn 795	Thr 810	Ile 825	Asn 840	Glu 855	Val 870	Ile 885	Ala 900	Glu 915	Asn 930	Leu 945
Glu 735	Ala 750	Ala 765	Lys 780	Lys 795	Leu 810	Arg 825	Glu 840	Thr 855	Gln 870	Gly 885	Ile 900	Glu 915	Lys 930	Leu 945	Val 960
Leu 750	Ile 765	Asn 780	Lys 795	Ser 810	Gly 825	Asn 840	Arg 855	Glu 870	Lys 885	Glu 900	Val 915	Arg 930	Ala 945	Ala 960	Pro 975
Ala 765	Leu 780	Val 795	Leu 810	Gln 825	Thr 840	Ile 855	Trp 870	Gly 885	Tyr 900	Lys 915	Glu 930	Leu 945	Arg 960	Lys 975	Pro 990
Leu 785	Glu 795	Lys 810	Glu 825	Gly 840	Trp 855	Lys 870	Lys 885	Ser 900	Asp 915	Phe 930	Gln 945	Val 960	Asn 975	Leu 990	Asn 1005
Asn 795	Ala 810	Ser 825	Arg 840	Ser 855	Gln 870	Ser 885	Ser 900	His 915	Ser 930	Tyr 945	Asp 960	Asp 975	Ser 990	Thr 1005	Leu 1020
Pro 810	Leu 825	Ile 840	Asp 855	Arg 870	Asn 885	Gln 900	Lys 915	Ser 930	Asp 945	Lys 960	Lys 975	Pro 990	Asp 1005	Arg 1020	Glu 1035
Glu 825	Ile 840	Gln 855	Met 870	Ser 885	Asn 900	Met 915	Gly 930	Ser 945	Asn 960	Thr 975	Lys 990	Ser 1005	Leu 1020	Asp 1035	Asn 1050
Asn 840	Tyr 855	Ser 870	Thr 885	Pro 900	Asn 915	Glu 930	Arg 945	Gly 960	Asp 975	His 990	Asn 1005	Arg 1020	Thr 1035	Leu 1050	Asp 1065
Arg 865	Ser 885	Gly 900	Asp 915	Leu 930	Gly 945	Asp 960	Met 975	Glu 990	Pro 1005	Leu 1020	Lys 1035	Gly 1050	Thr 1065	Thr 1080	Pro 1095
Leu 885	Met 900	Gln 915	Asp 930	Glu 945	Gln 960	Glu 975	Ser 990	Leu 1005	Val 1020	Glu 1035	Glu 1050	Leu 1065	Leu 1080	Asp 1095	Val 1110

<210> 11
 <211> 861
 <212> PRT
 <213> Homo sapiens

<400> 11

Met	Gln	Glu	Pro	Gly	Gln	Ile	Val	Glu	Thr	Tyr	Thr	Glu	Glu	Asp	Pro
1				5					10					15	
Glu	Gly	Ala	Met	Ser	Val	Val	Ser	Val	Glu	Thr	Ser	Asp	Asp	Gly	Thr
		20						25					30		
Thr	Arg	Arg	Thr	Glu	Thr	Thr	Val	Lys	Lys	Val	Val	Lys	Thr	Val	Thr
	35						40					45			
Thr	Arg	Thr	Val	Gln	Pro	Val	Ala	Met	Gly	Pro	Asp	Gly	Leu	Pro	Val
50						55					60				
Asp	Ala	Ser	Ser	Val	Ser	Asn	Asn	Tyr	Ile	Gln	Thr	Leu	Gly	Arg	Asp
65					70					75					80
Phe	Arg	Lys	Asn	Gly	Asn	Gly	Gly	Pro	Gly	Pro	Tyr	Val	Gly	Gln	Ala
			85						90					95	
Gly	Thr	Ala	Thr	Leu	Pro	Arg	Asn	Phe	His	Tyr	Pro	Pro	Asp	Gly	Tyr
			100					105					110		
Ser	Arg	His	Tyr	Glu	Asp	Gly	Tyr	Pro	Gly	Gly	Ser	Asp	Asn	Tyr	Gly
	115						120					125			
Ser	Leu	Ser	Arg	Val	Thr	Arg	Ile	Glu	Glu	Arg	Tyr	Arg	Pro	Ser	Met
130						135					140				
Glu	Gly	Tyr	Arg	Ala	Pro	Ser	Arg	Gln	Asp	Val	Tyr	Gly	Pro	Gln	Pro
145					150					155					160
Gln	Val	Arg	Val	Gly	Gly	Ser	Ser	Val	Asp	Leu	His	Arg	Phe	His	Pro
			165						170					175	
Glu	Pro	Tyr	Gly	Leu	Glu	Asp	Asp	Gln	Arg	Ser	Met	Gly	Tyr	Asp	Asp
		180						185				190			
Leu	Asp	Tyr	Gly	Met	Met	Ser	Asp	Tyr	Gly	Thr	Ala	Arg	Arg	Thr	Gly
195						200						205			
Thr	Pro	Ser	Asp	Pro	Arg	Arg	Arg	Leu	Arg	Ser	Tyr	Glu	Asp	Met	Ile
210						215					220				
Gly	Glu	Glu	Val	Pro	Ser	Asp	Gln	Tyr	Tyr	Trp	Ala	Pro	Leu	Ala	Gln
225					230					235					240
His	Glu	Arg	Gly	Ser	Leu	Ala	Ser	Leu	Asp	Ser	Leu	Arg	Lys	Gly	Gly
			245						250					255	
Pro	Pro	Pro	Pro	Asn	Trp	Arg	Gln	Pro	Glu	Leu	Pro	Glu	Val	Ile	Ala
			260					265					270		
Met	Leu	Gly	Phe	Arg	Leu	Asp	Ala	Val	Lys	Ser	Asn	Ala	Ala	Ala	Tyr
		275					280					285			
Leu	Gln	His	Leu	Cys	Tyr	Arg	Asn	Asp	Lys	Val	Lys	Thr	Asp	Val	Arg
290						295					300				
Lys	Leu	Lys	Gly	Ile	Pro	Val	Leu	Val	Gly	Leu	Leu	Asp	His	Pro	Lys
305					310					315					320
Lys	Glu	Val	His	Leu	Gly	Ala	Cys	Gly	Ala	Leu	Lys	Asn	Ile	Ser	Phe
			325						330					335	
Gly	Arg	Asp	Gln	Asp	Asn	Lys	Ile	Ala	Ile	Lys	Asn	Cys	Asp	Gly	Val
			340					345					350		
Pro	Ala	Leu	Val	Arg	Leu	Leu	Arg	Lys	Ala	Arg	Asp	Met	Asp	Leu	Thr
		355					360					365			
Glu	Val	Ile	Thr	Gly	Thr	Leu	Trp	Asn	Leu	Ser	Ser	His	Asp	Ser	Ile
370						375					380				

Lys Met Glu Ile Val Asp His Ala Leu His Ala Leu Thr Asp Glu Val
 385 390 395 400
 Ile Ile Pro His Ser Gly Trp Glu Arg Glu Pro Asn Glu Asp Cys Lys
 405 410 415
 Pro Arg His Ile Glu Trp Glu Ser Val Leu Thr Asn Thr Ala Gly Cys
 420 425 430
 Leu Arg Asn Val Ser Ser Glu Arg Ser Glu Ala Arg Arg Lys Leu Arg
 435 440 445
 Glu Cys Asp Gly Leu Val Asp Ala Leu Ile Phe Ile Val Gln Ala Glu
 450 455 460
 Ile Gly Gln Lys Asp Ser Asp Ser Lys Leu Val Glu Asn Cys Val Cys
 465 470 475 480
 Leu Leu Arg Asn Leu Ser Tyr Gln Val His Arg Glu Ile Pro Gln Ala
 485 490 495
 Glu Arg Tyr Gln Glu Ala Ala Pro Asn Val Ala Asn Asn Thr Gly Pro
 500 505 510
 His Ala Ala Ser Cys Phe Gly Ala Lys Lys Gly Lys Gly Lys Lys Pro
 515 520 525
 Ile Glu Asp Pro Ala Asn Asp Thr Val Asp Phe Pro Lys Arg Thr Ser
 530 535 540
 Pro Ala Arg Gly Tyr Glu Leu Leu Phe Gln Pro Glu Val Val Arg Ile
 545 550 555 560
 Tyr Ile Ser Leu Leu Lys Glu Ser Lys Thr Pro Ala Ile Leu Glu Ala
 565 570 575
 Ser Ala Gly Ala Ile Gln Asn Leu Cys Ala Gly Arg Trp Thr Tyr Gly
 580 585 590
 Arg Tyr Ile Arg Ser Ala Leu Arg Gln Glu Lys Ala Leu Ser Ala Ile
 595 600 605
 Ala Asp Leu Leu Thr Asn Glu His Glu Arg Val Val Lys Ala Ala Ser
 610 615 620
 Gly Ala Leu Arg Asn Leu Ala Val Asp Ala Arg Asn Lys Glu Leu Ile
 625 630 635 640
 Gly Lys His Ala Ile Pro Asn Leu Val Lys Asn Leu Pro Gly Gly Gln
 645 650 655
 Gln Asn Ser Ser Trp Asn Phe Ser Glu Asp Thr Val Ile Ser Ile Leu
 660 665 670
 Asn Thr Ile Asn Glu Val Ile Ala Glu Asn Leu Glu Ala Ala Lys Lys
 675 680 685
 Leu Arg Glu Thr Gln Gly Ile Glu Lys Leu Val Leu Ile Asn Lys Ser
 690 695 700
 Gly Asn Arg Ser Glu Lys Glu Val Arg Ala Ala Ala Leu Val Leu Gln
 705 710 715 720
 Thr Ile Trp Gly Tyr Lys Glu Leu Arg Lys Pro Leu Glu Lys Glu Gly
 725 730 735
 Trp Lys Lys Ser Asp Phe Gln Val Asn Leu Asn Asn Ala Ser Arg Ser
 740 745 750
 Gln Ser Ser His Ser Tyr Asp Asp Ser Thr Leu Pro Leu Ile Asp Arg
 755 760 765
 Asn Gln Lys Ser Asp Lys Lys Pro Asp Arg Glu Glu Ile Gln Met Ser
 770 775 780
 Asn Met Gly Ser Asn Thr Lys Ser Leu Asp Asn Asn Tyr Ser Thr Pro
 785 790 795 800
 Asn Glu Arg Gly Asp His Asn Arg Thr Leu Asp Arg Ser Gly Asp Leu
 805 810 815

Gly	Asp	Met	Glu	Pro	Leu	Lys	Gly	Thr	Thr	Pro	Leu	Met	Gln	Asp	Glu
			820					825					830		
Gly	Gln	Glu	Ser	Leu	Glu	Glu	Glu	Leu	Asp	Val	Leu	Val	Leu	Asp	Asp
		835					840					845			
Glu	Gly	Gly	Gln	Val	Ser	Tyr	Pro	Ser	Met	Gln	Lys	Ile			
	850					855					860				

<210> 12
 <211> 645
 <212> PRT
 <213> Homo sapiens

<400> 12

Met	Ile	Gly	Glu	Glu	Val	Pro	Ser	Asp	Gln	Tyr	Tyr	Trp	Ala	Pro	Leu
1				5					10					15	
Ala	Gln	His	Glu	Arg	Gly	Ser	Leu	Ala	Ser	Leu	Asp	Ser	Leu	Arg	Lys
			20					25					30		
Gly	Gly	Pro	Pro	Pro	Pro	Asn	Trp	Arg	Gln	Pro	Glu	Leu	Pro	Glu	Val
		35					40					45			
Ile	Ala	Met	Leu	Gly	Phe	Arg	Leu	Asp	Ala	Val	Lys	Ser	Asn	Ala	Ala
	50					55					60				
Ala	Tyr	Leu	Gln	His	Leu	Cys	Tyr	Arg	Asn	Asp	Lys	Val	Lys	Thr	Asp
65					70					75					80
Val	Arg	Lys	Leu	Lys	Gly	Ile	Pro	Val	Leu	Val	Gly	Leu	Leu	Asp	His
				85					90					95	
Pro	Lys	Lys	Glu	Val	His	Leu	Gly	Ala	Cys	Gly	Ala	Leu	Lys	Asn	Ile
			100					105					110		
Ser	Phe	Gly	Arg	Asp	Gln	Asp	Asn	Lys	Ile	Ala	Ile	Lys	Asn	Cys	Asp
	115						120					125			
Gly	Val	Pro	Ala	Leu	Val	Arg	Leu	Leu	Arg	Lys	Ala	Arg	Asp	Met	Asp
	130					135						140			
Leu	Thr	Glu	Val	Ile	Thr	Gly	Thr	Leu	Trp	Asn	Leu	Ser	Ser	His	Asp
145					150					155					160
Ser	Ile	Lys	Met	Glu	Ile	Val	Asp	His	Ala	Leu	His	Ala	Leu	Thr	Asp
			165						170					175	
Glu	Val	Ile	Ile	Pro	His	Ser	Gly	Trp	Glu	Arg	Glu	Pro	Asn	Glu	Asp
			180					185					190		
Cys	Lys	Pro	Arg	His	Ile	Glu	Trp	Glu	Ser	Val	Leu	Thr	Asn	Thr	Ala
	195						200					205			
Gly	Cys	Leu	Arg	Asn	Val	Ser	Ser	Glu	Arg	Ser	Glu	Ala	Arg	Arg	Lys
	210					215					220				
Leu	Arg	Glu	Cys	Asp	Gly	Leu	Val	Asp	Ala	Leu	Ile	Phe	Ile	Val	Gln
225					230					235					240
Ala	Glu	Ile	Gly	Gln	Lys	Asp	Ser	Asp	Ser	Lys	Leu	Val	Glu	Asn	Cys
			245						250					255	
Val	Cys	Leu	Leu	Arg	Asn	Leu	Ser	Tyr	Gln	Val	His	Arg	Glu	Ile	Pro
		260						265					270		
Gln	Ala	Glu	Arg	Tyr	Gln	Glu	Ala	Pro	Asn	Val	Ala	Asn	Asn	Thr	
	275					280					285				
Gly	Pro	His	Ala	Ala	Ser	Cys	Phe	Gly	Ala	Lys	Lys	Gly	Lys	Asp	Glu
	290					295					300				
Trp	Phe	Ser	Arg	Gly	Lys	Lys	Pro	Ile	Glu	Asp	Pro	Ala	Asn	Asp	Thr
305					310					315					320

Val Asp Phe Pro Lys Arg Thr Ser Pro Ala Arg Gly Tyr Glu Leu Leu
 325 330 335
 Phe Gln Pro Glu Val Val Arg Ile Tyr Ile Ser Leu Leu Lys Glu Ser
 340 345 350
 Lys Thr Pro Ala Ile Leu Glu Ala Ser Ala Gly Ala Ile Gln Asn Leu
 355 360 365
 Cys Ala Gly Arg Trp Thr Tyr Gly Arg Tyr Ile Arg Ser Ala Leu Arg
 370 375 380
 Gln Glu Lys Ala Leu Ser Ala Ile Ala Asp Leu Leu Thr Asn Glu His
 385 390 395 400
 Glu Arg Val Val Lys Ala Ala Ser Gly Ala Leu Arg Asn Leu Ala Val
 405 410 415
 Asp Ala Arg Asn Lys Glu Leu Ile Gly Lys His Ala Ile Pro Asn Leu
 420 425 430
 Val Lys Asn Leu Pro Gly Gly Gln Gln Asn Ser Ser Trp Asn Phe Ser
 435 440 445
 Glu Asp Thr Val Ile Ser Ile Leu Asn Thr Ile Asn Glu Val Ile Ala
 450 455 460
 Glu Asn Leu Glu Ala Ala Lys Lys Leu Arg Glu Thr Gln Gly Ile Glu
 465 470 475 480
 Lys Leu Val Leu Ile Asn Lys Ser Gly Asn Arg Ser Glu Lys Glu Val
 485 490 495
 Arg Ala Ala Ala Leu Val Leu Gln Thr Ile Trp Gly Tyr Lys Glu Leu
 500 505 510
 Arg Lys Pro Leu Glu Lys Glu Gly Trp Lys Lys Ser Asp Phe Gln Val
 515 520 525
 Asn Leu Asn Asn Ala Ser Arg Ser Gln Ser Ser His Ser Tyr Asp Asp
 530 535 540
 Ser Thr Leu Pro Leu Ile Asp Arg Asn Gln Lys Ser Asp Lys Lys Pro
 545 550 555 560
 Asp Arg Glu Glu Ile Gln Met Ser Asn Met Gly Ser Asn Thr Lys Ser
 565 570 575
 Leu Asp Asn Asn Tyr Ser Thr Pro Asn Glu Arg Gly Asp His Asn Arg
 580 585 590
 Thr Leu Asp Arg Ser Gly Asp Leu Gly Asp Met Glu Pro Leu Lys Gly
 595 600 605
 Thr Thr Pro Leu Met Gln Asp Glu Gly Gln Glu Ser Leu Glu Glu Glu
 610 615 620
 Leu Asp Val Leu Val Leu Asp Asp Glu Gly Gly Gln Val Ser Tyr Pro
 625 630 635 640
 Ser Met Gln Lys Ile
 645

<210> 13

<211> 694

<212> PRT

<213> Homo sapiens

<400> 13

Met Ser Gly Gly Glu Val Val Cys Ser Gly Trp Leu Arg Lys Ser Pro
 1 5 10 15
 Pro Glu Lys Lys Leu Lys Arg Tyr Ala Trp Lys Arg Arg Trp Phe Val
 20 25 30

Leu	Arg	Ser	Gly	Arg	Leu	Thr	Gly	Asp	Pro	Asp	Val	Leu	Glu	Tyr	Tyr		
		35					40					45					
Lys	Asn	Asp	His	Ala	Lys	Lys	Pro	Ile	Arg	Ile	Ile	Asp	Leu	Asn	Leu		
	50					55					60						
Cys	Gln	Gln	Val	Asp	Ala	Gly	Leu	Thr	Phe	Asn	Lys	Lys	Glu	Phe	Glu		
65					70					75					80		
Asn	Ser	Tyr	Ile	Phe	Asp	Ile	Asn	Thr	Ile	Asp	Arg	Ile	Phe	Tyr	Leu		
				85					90					95			
Val	Ala	Asp	Ser	Glu	Glu	Glu	Met	Asn	Lys	Trp	Val	Arg	Cys	Ile	Cys		
			100					105					110				
Asp	Ile	Cys	Gly	Phe	Asn	Pro	Thr	Glu	Glu	Asp	Pro	Val	Lys	Pro	Pro		
	115						120					125					
Gly	Ser	Ser	Leu	Gln	Ala	Pro	Ala	Asp	Leu	Pro	Leu	Ala	Ile	Asn	Thr		
	130					135					140						
Ala	Pro	Pro	Ser	Thr	Gln	Ala	Asp	Ser	Ser	Ser	Ala	Thr	Leu	Pro	Pro		
145					150					155					160		
Pro	Tyr	Gln	Leu	Ile	Asn	Val	Pro	Pro	His	Leu	Glu	Thr	Leu	Gly	Ile		
				165					170					175			
Gln	Glu	Asp	Pro	Gln	Asp	Tyr	Leu	Leu	Leu	Ile	Asn	Cys	Gln	Ser	Lys		
			180				185					190					
Lys	Pro	Glu	Pro	Thr	Arg	Thr	His	Ala	Asp	Ser	Gly	Lys	Ser	Thr	Ser		
	195					200					205						
Ser	Glu	Thr	Asp	Ser	Asn	Asp	Asn	Val	Pro	Ser	His	Lys	Asn	Pro	Ala		
	210				215					220							
Ser	Ser	Gln	Ser	Lys	His	Gly	Met	Asn	Gly	Phe	Phe	Gln	Gln	Gln	Met		
225				230						235					240		
Ile	Tyr	Asp	Ser	Pro	Pro	Ser	Arg	Ala	Pro	Ser	Ala	Ser	Val	Asp	Ser		
			245					250						255			
Ser	Leu	Tyr	Asn	Leu	Pro	Arg	Ser	Tyr	Ser	His	Asp	Val	Leu	Pro	Lys		
	260						265					270					
Val	Ser	Pro	Ser	Ser	Thr	Glu	Ala	Asp	Gly	Glu	Leu	Tyr	Val	Phe	Asn		
	275					280					285						
Thr	Pro	Ser	Gly	Thr	Ser	Ser	Val	Glu	Thr	Gln	Met	Arg	His	Val	Ser		
	290				295					300							
Ile	Ser	Tyr	Asp	Ile	Pro	Pro	Thr	Pro	Gly	Asn	Thr	Tyr	Gln	Ile	Pro		
305				310					315						320		
Arg	Thr	Phe	Pro	Glu	Gly	Thr	Leu	Gly	Gln	Thr	Ser	Lys	Leu	Asp	Thr		
			325					330						335			
Ile	Pro	Asp	Ile	Pro	Pro	Pro	Arg	Pro	Pro	Lys	Pro	His	Pro	Ala	His		
			340				345					350					
Asp	Arg	Ser	Pro	Val	Glu	Thr	Cys	Ser	Ile	Pro	Arg	Thr	Ala	Ser	Asp		
	355					360					365						
Thr	Asp	Ser	Ser	Tyr	Cys	Ile	Pro	Thr	Ala	Gly	Met	Ser	Pro	Ser	Arg		
	370				375						380						
Ser	Asn	Thr	Ile	Ser	Thr	Val	Asp	Leu	Asn	Lys	Leu	Arg	Lys	Asp	Ala		
385				390					395						400		
Ser	Ser	Gln	Asp	Cys	Tyr	Asp	Ile	Pro	Arg	Ala	Phe	Pro	Ser	Asp	Arg		
			405					410						415			
Ser	Ser	Ser	Leu	Glu	Gly	Phe	His	Asn	His	Phe	Lys	Val	Lys	Asn	Val		
			420				425					430					
Leu	Thr	Val	Gly	Ser	Val	Ser	Ser	Glu	Glu	Leu	Asp	Glu	Asn	Tyr	Val		
	435					440					445						
Pro	Met	Asn	Pro	Asn	Ser	Pro	Pro	Arg	Gln	His	Ser	Ser	Ser	Phe	Thr		
	450					455					460						

Glu Pro Ile Gln Glu Ala Asn Tyr Val Pro Met Thr Pro Gly Thr Phe
 465 470 475 480
 Asp Phe Ser Ser Phe Gly Met Gln Val Pro Pro Pro Ala His Met Gly
 485 490 495
 Phe Arg Ser Ser Pro Lys Thr Pro Pro Arg Arg Pro Val Pro Val Ala
 500 505 510
 Asp Cys Glu Pro Pro Pro Val Asp Arg Asn Leu Lys Pro Asp Arg Lys
 515 520 525
 Val Lys Pro Ala Pro Leu Glu Ile Lys Pro Leu Pro Glu Trp Glu Glu
 530 535 540
 Leu Gln Ala Pro Val Arg Ser Pro Ile Thr Arg Ser Phe Ala Arg Asp
 545 550 555 560
 Ser Ser Arg Phe Pro Met Ser Pro Arg Pro Asp Ser Val His Ser Thr
 565 570 575
 Thr Ser Ser Ser Asp Ser His Asp Ser Glu Glu Asn Tyr Val Pro Met
 580 585 590
 Asn Pro Asn Leu Ser Ser Glu Asp Pro Asn Leu Phe Gly Ser Asn Ser
 595 600 605
 Leu Asp Gly Gly Ser Ser Pro Met Ile Lys Pro Lys Gly Asp Lys Gln
 610 615 620
 Val Glu Tyr Leu Asp Leu Asp Leu Asp Ser Gly Lys Ser Thr Pro Pro
 625 630 635 640
 Arg Lys Gln Lys Ser Ser Gly Ser Gly Ser Ser Val Ala Asp Glu Arg
 645 650 655
 Val Asp Tyr Val Val Val Asp Gln Gln Lys Thr Leu Ala Leu Lys Ser
 660 665 670
 Thr Arg Glu Ala Trp Thr Asp Gly Arg Gln Ser Thr Glu Ser Glu Thr
 675 680 685
 Pro Ala Lys Ser Val Lys
 690

<210> 14
 <211> 745
 <212> PRT
 <213> Homo sapiens

<400> 14
 Met Glu Val Met Asn Leu Met Glu Gln Pro Ile Lys Val Thr Glu Trp
 1 5 10 15
 Gln Gln Thr Tyr Thr Tyr Asp Ser Gly Ile His Ser Gly Ala Asn Thr
 20 25 30
 Cys Val Pro Ser Val Ser Ser Lys Gly Ile Met Glu Glu Asp Glu Ala
 35 40 45
 Cys Gly Arg Gln Tyr Thr Leu Lys Lys Thr Thr Thr Tyr Thr Gln Gly
 50 55 60
 Val Pro Pro Ser Gln Gly Asp Leu Glu Tyr Gln Met Ser Thr Thr Ala
 65 70 75 80
 Arg Ala Lys Arg Val Arg Glu Ala Met Cys Pro Gly Val Ser Gly Glu
 85 90 95
 Asp Ser Ser Leu Leu Leu Ala Thr Gln Val Glu Gly Gln Ala Thr Asn
 100 105 110
 Leu Gln Arg Leu Ala Glu Pro Ser Gln Leu Leu Lys Ser Ala Ile Val
 115 120 125

His	Leu	Ile	Asn	Tyr	Gln	Asp	Asp	Ala	Glu	Leu	Ala	Thr	Arg	Ala	Leu	130	135	140
Pro	Glu	Leu	Thr	Lys	Leu	Leu	Asn	Asp	Glu	Asp	Pro	Val	Val	Val	Thr	145	150	155
Lys	Ala	Ala	Met	Ile	Val	Asn	Gln	Leu	Ser	Lys	Lys	Glu	Ala	Ser	Arg	165	170	175
Arg	Ala	Leu	Met	Gly	Ser	Pro	Gln	Leu	Val	Ala	Ala	Val	Val	Arg	Thr	180	185	190
Met	Gln	Asn	Thr	Ser	Asp	Leu	Asp	Thr	Ala	Arg	Cys	Thr	Thr	Ser	Ile	195	200	205
Leu	His	Asn	Leu	Ser	His	His	Arg	Glu	Gly	Leu	Leu	Ala	Ile	Phe	Lys	210	215	220
Ser	Gly	Gly	Ile	Pro	Ala	Leu	Val	Arg	Met	Leu	Ser	Ser	Pro	Val	Glu	225	230	235
Ser	Val	Leu	Phe	Tyr	Ala	Ile	Thr	Thr	Leu	His	Asn	Leu	Leu	Leu	Tyr	245	250	255
Gln	Glu	Gly	Ala	Lys	Met	Ala	Val	Arg	Leu	Ala	Asp	Gly	Leu	Gln	Lys	260	265	270
Met	Val	Pro	Leu	Leu	Asn	Lys	Asn	Asn	Pro	Lys	Phe	Leu	Ala	Ile	Thr	275	280	285
Thr	Asp	Cys	Leu	Gln	Leu	Leu	Ala	Tyr	Gly	Asn	Gln	Glu	Ser	Lys	Leu	290	295	300
Ile	Ile	Leu	Ala	Asn	Gly	Gly	Pro	Gln	Ala	Leu	Val	Gln	Ile	Met	Arg	305	310	315
Asn	Tyr	Ser	Tyr	Glu	Lys	Leu	Leu	Trp	Thr	Thr	Ser	Arg	Val	Leu	Lys	325	330	335
Val	Leu	Ser	Val	Cys	Pro	Ser	Asn	Lys	Pro	Ala	Ile	Val	Glu	Ala	Gly	340	345	350
Gly	Met	Gln	Ala	Leu	Gly	Lys	His	Leu	Thr	Ser	Asn	Ser	Pro	Arg	Leu	355	360	365
Val	Gln	Asn	Cys	Leu	Trp	Thr	Leu	Arg	Asn	Leu	Ser	Asp	Val	Ala	Thr	370	375	380
Lys	Gln	Glu	Gly	Leu	Glu	Ser	Val	Leu	Lys	Ile	Leu	Val	Asn	Gln	Leu	385	390	395
Ser	Val	Asp	Asp	Val	Asn	Val	Leu	Thr	Cys	Ala	Thr	Gly	Thr	Leu	Ser	405	410	415
Asn	Leu	Thr	Cys	Asn	Asn	Ser	Lys	Asn	Lys	Thr	Leu	Val	Thr	Gln	Asn	420	425	430
Ser	Gly	Val	Glu	Ala	Leu	Ile	His	Ala	Ile	Leu	Arg	Ala	Gly	Asp	Lys	435	440	445
Asp	Asp	Ile	Thr	Glu	Pro	Ala	Val	Cys	Ala	Leu	Arg	His	Leu	Thr	Ser	450	455	460
Arg	His	Pro	Glu	Ala	Glu	Met	Ala	Gln	Asn	Ser	Val	Arg	Leu	Asn	Tyr	465	470	475
Gly	Ile	Pro	Ala	Ile	Val	Lys	Leu	Leu	Asn	Gln	Pro	Asn	Gln	Trp	Pro	485	490	495
Leu	Val	Lys	Ala	Thr	Ile	Gly	Leu	Ile	Arg	Asn	Leu	Ala	Leu	Cys	Pro	500	505	510
Ala	Asn	His	Ala	Pro	Leu	Gln	Glu	Ala	Ala	Val	Ile	Pro	Arg	Leu	Val	515	520	525
Gln	Leu	Leu	Val	Lys	Ala	His	Gln	Asp	Ala	Gln	Arg	His	Val	Ala	Ala	530	535	540
Gly	Thr	Gln	Gln	Pro	Tyr	Thr	Asp	Gly	Val	Arg	Met	Glu	Glu	Ile	Val	545	550	555

Glu	Gly	Cys	Thr	Gly 565	Ala	Leu	His	Ile	Leu 570	Ala	Arg	Asp	Pro	Met	Asn
Arg	Met	Glu	Ile 580	Phe	Arg	Leu	Asn	Thr 585	Ile	Pro	Leu	Phe	Val 590	Gln	Leu
Leu	Tyr	Ser	Ser	Val	Glu	Asn	Ile 600	Gln	Arg	Val	Ala	Ala 605	Gly	Val	Leu
Cys	Glu	Leu	Ala	Gln	Asp	Lys 615	Glu	Ala	Ala	Asp	Ala 620	Ile	Asp	Ala	Glu
Gly 625	Ala	Ser	Ala	Pro	Leu 630	Met	Glu	Leu	Leu	His 635	Ser	Arg	Asn	Glu	Gly 640
Thr	Ala	Thr	Tyr	Ala 645	Ala	Ala	Val	Leu	Phe 650	Arg	Ile	Ser	Glu	Asp 655	Lys
Asn	Pro	Asp	Tyr 660	Arg	Lys	Arg	Val	Ser 665	Val	Glu	Leu	Thr	Asn 670	Ser	Leu
Phe	Lys	His	Asp 675	Pro	Ala	Ala	Trp 680	Glu	Ala	Ala	Gln	Ser 685	Met	Ile	Pro
Ile	Asn 690	Glu	Pro	Tyr	Gly	Asp 695	Asp	Leu	Asp	Ala	Thr 700	Tyr	Arg	Pro	Met
Tyr 705	Ser	Ser	Asp	Val	Pro 710	Leu	Asp	Pro	Leu	Glu 715	Met	His	Met	Asp	Met 720
Asp	Gly	Asp	Tyr	Pro 725	Ile	Asp	Thr	Tyr	Ser 730	Asp	Gly	Leu	Arg	Pro 735	Pro
Tyr	Pro	Thr	Ala 740	Asp	His	Met	Leu	Ala 745							

```
<210> 15
<211> 745
<212> PRT
<213> Homo sapiens
```

<400>	15															
Met	Glu	Val	Met	Asn	Leu	Met	Glu	Gln	Pro	Ile	Lys	Val	Thr	Glu	Trp	
1				5					10					15		
Gln	Gln	Thr	Tyr	Thr	Tyr	Asp	Ser	Gly	Ile	His	Ser	Gly	Ala	Asn	Thr	
			20					25					30			
Cys	Val	Pro	Ser	Val	Ser	Ser	Lys	Gly	Ile	Met	Glu	Glu	Asp	Glu	Ala	
		35					40					45				
Cys	Gly	Arg	Gln	Tyr	Thr	Leu	Lys	Lys	Thr	Thr	Thr	Tyr	Thr	Gln	Gly	
	50					55					60					
Val	Pro	Pro	Ser	Gln	Gly	Asp	Leu	Glu	Tyr	Gln	Met	Ser	Thr	Thr	Ala	
65					70					75					80	
Arg	Ala	Lys	Arg	Val	Arg	Glu	Ala	Met	Cys	Pro	Gly	Val	Ser	Gly	Glu	
				85					90					95		
Asp	Ser	Ser	Leu	Leu	Leu	Ala	Thr	Gln	Val	Glu	Gly	Gln	Ala	Thr	Asn	
			100					105					110			
Leu	Gln	Arg	Leu	Ala	Glu	Pro	Ser	Gln	Leu	Leu	Lys	Ser	Ala	Ile	Val	
		115					120					125				
His	Leu	Ile	Asn	Tyr	Gln	Asp	Asp	Ala	Glu	Leu	Ala	Thr	Arg	Ala	Leu	
	130					135					140					
Pro	Glu	Leu	Thr	Lys	Leu	Leu	Asn	Asp	Glu	Asp	Pro	Val	Val	Val	Thr	
145					150					155					160	
Lys	Ala	Ala	Met	Ile	Val	Asn	Gln	Leu	Ser	Lys	Lys	Glu	Ala	Ser	Arg	
				165					170					175		

Arg	Ala	Leu	Met	Gly	Ser	Pro	Gln	Leu	Val	Ala	Ala	Val	Val	Arg	Thr
			180					185					190		
Met	Gln	Asn	Thr	Ser	Asp	Leu	Asp	Thr	Ala	Arg	Cys	Thr	Thr	Ser	Ile
		195					200					205			
Leu	His	Asn	Leu	Ser	His	His	Arg	Glu	Gly	Leu	Leu	Ala	Ile	Phe	Lys
	210					215					220				
Ser	Gly	Gly	Ile	Pro	Ala	Leu	Val	Arg	Met	Leu	Ser	Ser	Pro	Val	Glu
225					230					235					240
Ser	Val	Leu	Phe	Tyr	Ala	Ile	Thr	Thr	Leu	His	Asn	Leu	Leu	Leu	Tyr
				245					250					255	
Gln	Glu	Gly	Ala	Lys	Met	Ala	Val	Arg	Leu	Ala	Asp	Gly	Leu	Gln	Lys
			260					265					270		
Met	Val	Pro	Leu	Leu	Asn	Lys	Asn	Asn	Pro	Lys	Phe	Leu	Ala	Ile	Thr
		275					280					285			
Thr	Asp	Cys	Leu	Gln	Leu	Leu	Ala	Tyr	Gly	Asn	Gln	Glu	Ser	Lys	Leu
	290					295					300				
Ile	Ile	Leu	Ala	Asn	Gly	Gly	Pro	Gln	Ala	Leu	Val	Gln	Ile	Met	Arg
305					310					315					320
Asn	Tyr	Ser	Tyr	Glu	Lys	Leu	Leu	Trp	Thr	Thr	Ser	Arg	Val	Leu	Lys
				325					330					335	
Val	Leu	Ser	Val	Cys	Pro	Ser	Asn	Lys	Pro	Ala	Ile	Val	Glu	Ala	Gly
			340					345					350		
Gly	Met	Gln	Ala	Leu	Gly	Lys	His	Leu	Thr	Ser	Asn	Ser	Pro	Arg	Leu
		355					360					365			
Val	Gln	Asn	Cys	Leu	Trp	Thr	Leu	Arg	Asn	Leu	Ser	Asp	Val	Ala	Thr
	370					375					380				
Lys	Gln	Glu	Gly	Leu	Glu	Ser	Val	Leu	Lys	Ile	Leu	Val	Asn	Gln	Leu
385					390					395					400
Ser	Val	Asp	Asp	Val	Asn	Val	Leu	Thr	Cys	Ala	Thr	Gly	Thr	Leu	Ser
				405					410					415	
Asn	Leu	Thr	Cys	Asn	Asn	Ser	Lys	Asn	Lys	Thr	Leu	Val	Thr	Gln	Asn
			420					425					430		
Ser	Gly	Val	Glu	Ala	Leu	Ile	His	Ala	Ile	Leu	Arg	Ala	Gly	Asp	Lys
		435					440					445			
Asp	Asp	Ile	Thr	Glu	Pro	Ala	Val	Cys	Ala	Leu	Arg	His	Leu	Thr	Ser
	450					455					460				
Arg	His	Pro	Glu	Ala	Glu	Met	Ala	Gln	Asn	Ser	Val	Arg	Leu	Asn	Tyr
465					470					475					480
Gly	Ile	Pro	Ala	Ile	Val	Lys	Leu	Leu	Asn	Gln	Pro	Asn	Gln	Trp	Pro
				485					490					495	
Leu	Val	Lys	Ala	Thr	Ile	Gly	Leu	Ile	Arg	Asn	Leu	Ala	Leu	Cys	Pro
			500					505					510		
Ala	Asn	His	Ala	Pro	Leu	Gln	Glu	Ala	Ala	Val	Ile	Pro	Arg	Leu	Val
		515					520					525			

Cys Glu Leu Ala Gln Asp Lys Glu Ala Ala Asp Ala Ile Asp Ala Glu
 610 615 620
 Gly Ala Ser Ala Pro Leu Met Glu Leu Leu His Ser Arg Asn Glu Gly
 625 630 635 640
 Thr Ala Thr Tyr Ala Ala Ala Val Leu Phe Arg Ile Ser Glu Asp Lys
 645 650 655
 Asn Pro Asp Tyr Arg Lys Arg Val Ser Val Glu Leu Thr Asn Ser Leu
 660 665 670
 Phe Lys His Asp Pro Ala Ala Trp Glu Ala Ala Gln Ser Met Ile Pro
 675 680 685
 Ile Asn Glu Pro Tyr Gly Asp Asp Met Asp Ala Thr Tyr Arg Pro Met
 690 695 700
 Tyr Ser Ser Asp Val Pro Leu Asp Pro Leu Glu Met His Met Asp Met
 705 710 715 720
 Asp Gly Asp Tyr Pro Ile Asp Thr Tyr Ser Asp Gly Leu Arg Pro Pro
 725 730 735
 Tyr Pro Thr Ala Asp His Met Leu Ala
 740 745

<210> 16
 <211> 781
 <212> PRT
 <213> Homo sapiens

<400> 16
 Met Ala Thr Gln Ala Asp Leu Met Glu Leu Asp Met Ala Met Glu Pro
 1 5 10 15
 Asp Arg Lys Ala Ala Val Ser His Trp Gln Gln Gln Ser Tyr Leu Asp
 20 25 30
 Ser Gly Ile His Ser Gly Ala Thr Thr Ala Pro Ser Leu Ser Gly
 35 40 45
 Lys Gly Asn Pro Glu Glu Glu Asp Val Asp Thr Ser Gln Val Leu Tyr
 50 55 60
 Glu Trp Glu Gln Gly Phe Ser Gln Ser Phe Thr Gln Glu Gln Val Ala
 65 70 75 80
 Asp Ile Asp Gly Gln Tyr Ala Met Thr Arg Ala Gln Arg Val Arg Ala
 85 90 95
 Ala Met Phe Pro Glu Thr Leu Asp Glu Gly Met Gln Ile Pro Ser Thr
 100 105 110
 Gln Phe Asp Ala Ala His Pro Thr Asn Val Gln Arg Leu Ala Glu Pro
 115 120 125
 Ser Gln Met Leu Lys His Ala Val Val Asn Leu Ile Asn Tyr Gln Asp
 130 135 140
 Asp Ala Glu Leu Ala Thr Arg Ala Ile Pro Glu Leu Thr Lys Leu Leu
 145 150 155 160
 Asn Asp Glu Asp Gln Val Val Val Asn Lys Ala Ala Val Met Val His
 165 170 175
 Gln Leu Ser Lys Glu Ala Ser Arg His Ala Ile Met Arg Ser Pro
 180 185 190
 Gln Met Val Ser Ala Ile Val Arg Thr Met Gln Asn Thr Asn Asp Val
 195 200 205
 Glu Thr Ala Arg Cys Thr Ala Gly Thr Leu His Asn Leu Ser His His
 210 215 220

Arg	Glu	Gly	Leu	Leu	Ala	Ile	Phe	Lys	Ser	Gly	Gly	Ile	Pro	Ala	Leu	225	230	235	240
Val	Lys	Met	Leu	Gly	Ser	Pro	Val	Asp	Ser	Val	Leu	Phe	Tyr	Ala	Ile	245	250	255	
Thr	Thr	Leu	His	Asn	Leu	Leu	Leu	His	Gln	Glu	Gly	Ala	Lys	Met	Ala	260	265	270	
Val	Arg	Leu	Ala	Gly	Gly	Leu	Gln	Lys	Met	Val	Ala	Leu	Leu	Asn	Lys	275	280	285	
Thr	Asn	Val	Lys	Phe	Leu	Ala	Ile	Thr	Thr	Asp	Cys	Leu	Gln	Ile	Leu	290	295	300	
Ala	Tyr	Gly	Asn	Gln	Glu	Ser	Lys	Leu	Ile	Ile	Leu	Ala	Ser	Gly	Gly	305	310	315	320
Pro	Gln	Ala	Leu	Val	Asn	Ile	Met	Arg	Thr	Tyr	Thr	Tyr	Glu	Lys	Leu	325	330	335	
Leu	Trp	Thr	Thr	Ser	Arg	Val	Leu	Lys	Val	Leu	Ser	Val	Cys	Ser	Ser	340	345	350	
Asn	Lys	Pro	Ala	Ile	Val	Glu	Ala	Gly	Gly	Met	Gln	Ala	Leu	Gly	Leu	355	360	365	
His	Leu	Thr	Asp	Pro	Ser	Gln	Arg	Leu	Val	Gln	Asn	Cys	Leu	Trp	Thr	370	375	380	
Leu	Arg	Asn	Leu	Ser	Asp	Ala	Ala	Thr	Lys	Gln	Glu	Gly	Met	Glu	Gly	385	390	395	400
Leu	Leu	Gly	Thr	Leu	Val	Gln	Leu	Leu	Gly	Ser	Asp	Asp	Ile	Asn	Val	405	410	415	
Val	Thr	Cys	Ala	Ala	Gly	Ile	Leu	Ser	Asn	Leu	Thr	Cys	Asn	Asn	Tyr	420	425	430	
Lys	Asn	Lys	Met	Met	Val	Cys	Gln	Val	Gly	Gly	Ile	Glu	Ala	Leu	Val	435	440	445	
Arg	Thr	Val	Leu	Arg	Ala	Gly	Asp	Arg	Glu	Asp	Ile	Thr	Glu	Pro	Ala	450	455	460	
Ile	Cys	Ala	Leu	Arg	His	Leu	Thr	Ser	Arg	His	Gln	Glu	Ala	Glu	Met	465	470	475	480
Ala	Gln	Asn	Ala	Val	Arg	Leu	His	Tyr	Gly	Leu	Pro	Val	Val	Val	Lys	485	490	495	
Leu	Leu	His	Pro	Pro	Ser	His	Trp	Pro	Leu	Ile	Lys	Ala	Thr	Val	Gly	500	505	510	
Leu	Ile	Arg	Asn	Leu	Ala	Leu	Cys	Pro	Ala	Asn	His	Ala	Pro	Leu	Arg	515	520	525	
Glu	Gln	Gly	Ala	Ile	Pro	Arg	Leu	Val	Gln	Leu	Leu	Val	Arg	Ala	His	530	535	540	
Gln	Asp	Thr	Gln	Arg	Arg	Thr	Ser	Met	Gly	Gly	Thr	Gln	Gln	Gln	Phe	545	550	555	560
Val	Glu	Gly	Val	Arg	Met	Glu	Glu	Ile	Val	Glu	Gly	Cys	Thr	Gly	Ala	565	570	575	
Leu	His	Ile	Leu	Ala	Arg	Asp	Val	His	Asn	Arg	Ile	Val	Ile	Arg	Gly	580	585	590	
Leu	Asn	Thr	Ile	Pro	Leu	Phe	Val	Gln	Leu	Leu	Tyr	Ser	Pro	Ile	Glu	595	600	605	
Asn	Ile	Gln	Arg	Val	Ala	Ala	Gly	Val	Leu	Cys	Glu	Leu	Ala	Gln	Asp	610	615	620	
Lys	Glu	Ala	Ala	Glu	Ala	Ile	Glu	Ala	Glu	Gly	Ala	Thr	Ala	Pro	Leu	625	630	635	640
Thr	Glu	Leu	Leu	His	Ser	Arg	Asn	Glu	Gly	Val	Ala	Thr	Tyr	Ala	Ala	645	650	655	

Ala	Val	Leu	Phe	Arg	Met	Ser	Glu	Asp	Lys	Pro	Gln	Asp	Tyr	Lys	Lys
			660					665					670		
Arg	Leu	Ser	Val	Glu	Leu	Thr	Ser	Ser	Leu	Phe	Arg	Thr	Glu	Pro	Met
		675					680					685			
Ala	Trp	Asn	Glu	Thr	Ala	Asp	Leu	Gly	Leu	Asp	Ile	Gly	Ala	Gln	Gly
	690					695					700				
Glu	Pro	Leu	Gly	Tyr	Arg	Gln	Asp	Asp	Pro	Ser	Tyr	Arg	Ser	Phe	His
705					710					715					720
Ser	Gly	Gly	Tyr	Gly	Gln	Asp	Ala	Leu	Gly	Met	Asp	Pro	Met	Met	Glu
				725					730					735	
His	Glu	Met	Gly	Gly	His	His	Pro	Gly	Ala	Asp	Tyr	Pro	Val	Asp	Gly
			740					745					750		
Leu	Pro	Asp	Leu	Gly	His	Ala	Gln	Asp	Leu	Met	Asp	Gly	Leu	Pro	Pro
		755					760					765			
Gly	Asp	Ser	Asn	Gln	Leu	Ala	Trp	Phe	Asp	Thr	Asp	Leu			
	770					775					780				

<210> 17
 <211> 7
 <212> PRT
 <213> Unknown

<220>
 <223> Conserved catalytic domain that is a unique
 signature sequence motif that is invariant among
 all PTPs.

<220>
 <221> VARIANT
 <222> 2,3,4,5,6
 <223> Xaa = any amino acid

<400> 17
 Cys Xaa Xaa Xaa Xaa Xaa Arg
 1 5

<210> 18
 <211> 11
 <212> PRT
 <213> unknown

<220>
 <223> Eleven amino acid conserved sequence found in a
 majority of PTPs.

<221> VARIANT
 <222> 1
 <223> Xaa = Ile or Val

<221> VARIANT
 <222> 10
 <223> Xaa = Ser or Thr

<400> 18
 Xaa His Cys Xaa Ala Gly Xaa Xaa Arg Xaa Gly
 1 5 10

<210> 19
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> DEP-1 extracellular domain peptide.

<400> 19
 Cys Asp Ala Ser Asn Thr Glu Arg Ser Arg Ala Gly Ser Pro Thr Ala
 1 5 10 15
 Pro

<210> 20
 <211> 8
 <212> PRT
 <213> unknown

<220>
 <223> Sequence which matched the src substrate and
 adherens junction component, p120ctn

<400> 20
 Asn Leu Ser Tyr Gln Val His Arg
 1 5

<210> 21
 <211> 17
 <212> PRT
 <213> unknown

<220>
 <223> Sequences which matched the src substrate and
 adherens junction component, p120ctn

<400> 21
 Ser Gln Ser Ser His Ser Tyr Asp Asp Ser Thr Leu Pro Leu Ile Asp
 1 5 10 15
 Arg

<210> 22
 <211> 745
 <212> PRT

<213> Homo sapiens

<400> 22

Met	Glu	Val	Met	Asn	Leu	Met	Glu	Gln	Pro	Ile	Lys	Val	Thr	Glu	Trp
1				5					10					15	
Gln	Gln	Thr	Tyr	Thr	Tyr	Asp	Ser	Gly	Ile	His	Ser	Gly	Ala	Asn	Thr
			20					25					30		
Cys	Val	Pro	Ser	Val	Ser	Ser	Lys	Gly	Ile	Met	Glu	Glu	Asp	Glu	Ala
		35					40					45			
Cys	Gly	Arg	Gln	Tyr	Thr	Leu	Lys	Lys	Thr	Thr	Thr	Tyr	Thr	Gln	Gly
	50					55					60				
Val	Pro	Pro	Ser	Gln	Gly	Asp	Leu	Glu	Tyr	Gln	Met	Ser	Thr	Thr	Ala
65					70					75					80
Arg	Ala	Lys	Arg	Val	Arg	Glu	Ala	Met	Cys	Pro	Gly	Val	Ser	Gly	Glu
				85					90					95	
Asp	Ser	Ser	Leu	Leu	Leu	Ala	Thr	Gln	Val	Glu	Gly	Gln	Ala	Thr	Asn
			100					105					110		
Leu	Gln	Arg	Leu	Ala	Glu	Pro	Ser	Gln	Leu	Leu	Lys	Ser	Ala	Ile	Val
		115					120					125			
His	Leu	Ile	Asn	Tyr	Gln	Asp	Asp	Ala	Glu	Leu	Ala	Thr	Arg	Ala	Leu
	130					135					140				
Pro	Glu	Leu	Thr	Lys	Leu	Leu	Asn	Asp	Glu	Asp	Pro	Val	Val	Val	Thr
145					150					155					160
Lys	Ala	Ala	Met	Ile	Val	Asn	Gln	Leu	Ser	Lys	Lys	Glu	Ala	Ser	Arg
				165					170					175	
Arg	Ala	Leu	Met	Gly	Ser	Pro	Gln	Leu	Val	Ala	Ala	Val	Val	Arg	Thr
		180						185					190		
Met	Gln	Asn	Thr	Ser	Asp	Leu	Asp	Thr	Ala	Arg	Cys	Thr	Thr	Ser	Ile
		195					200					205			
Leu	His	Asn	Leu	Ser	His	His	Arg	Glu	Gly	Leu	Leu	Ala	Ile	Phe	Lys
	210					215					220				
Ser	Gly	Gly	Ile	Pro	Ala	Leu	Val	Arg	Met	Leu	Ser	Ser	Pro	Val	Glu
225					230					235					240
Ser	Val	Leu	Phe	Tyr	Ala	Ile	Thr	Thr	Leu	His	Asn	Leu	Leu	Leu	Tyr
				245					250					255	
Gln	Glu	Gly	Ala	Lys	Met	Ala	Val	Arg	Leu	Ala	Asp	Gly	Leu	Gln	Lys
			260					265					270		
Met	Val	Pro	Leu	Leu	Asn	Lys	Asn	Asn	Pro	Lys	Phe	Leu	Ala	Ile	Thr
		275					280					285			
Thr	Asp	Cys	Leu	Gln	Leu	Leu	Ala	Tyr	Gly	Asn	Gln	Glu	Ser	Lys	Leu
	290					295					300				
Ile	Ile	Leu	Ala	Asn	Gly	Gly	Pro	Gln	Ala	Leu	Val	Gln	Ile	Met	Arg
305					310					315					320
Asn	Tyr	Ser	Tyr	Glu	Lys	Leu	Leu	Trp	Thr	Thr	Ser	Arg	Val	Leu	Lys
				325					330					335	
Val	Leu	Ser	Val	Cys	Pro	Ser	Asn	Lys	Pro	Ala	Ile	Val	Glu	Ala	Gly
			340					345					350		
Gly	Met	Gln	Ala	Leu	Gly	Lys	His	Leu	Thr	Ser	Asn	Ser	Pro	Arg	Leu
		355					360					365			
Val	Gln	Asn	Cys	Leu	Trp	Thr	Leu	Arg	Asn	Leu	Ser	Asp	Val	Ala	Thr
	370					375					380				
Lys	Gln	Glu	Gly	Leu	Glu	Ser	Val	Leu	Lys	Ile	Leu	Val	Asn	Gln	Leu
385					390					395					400
Ser	Val	Asp	Asp	Val	Asn	Val	Leu	Thr	Cys	Ala	Thr	Gly	Thr	Leu	Ser

				405				410				415				
Asn	Leu	Thr	Cys	Asn	Asn	Ser	Lys	Asn	Lys	Thr	Leu	Val	Thr	Gln	Asn	
			420				425						430			
Ser	Gly	Val	Glu	Ala	Leu	Ile	His	Ala	Ile	Leu	Arg	Ala	Gly	Asp	Lys	
			435				440						445			
Asp	Asp	Ile	Thr	Glu	Pro	Ala	Val	Cys	Ala	Leu	Arg	His	Leu	Thr	Ser	
			450				455						460			
Arg	His	Pro	Glu	Ala	Glu	Met	Ala	Gln	Asn	Ser	Val	Arg	Leu	Asn	Tyr	
			465				470						475			
Gly	Ile	Pro	Ala	Ile	Val	Lys	Leu	Leu	Asn	Gln	Pro	Asn	Gln	Trp	Pro	
			485				490						495			
Leu	Val	Lys	Ala	Thr	Ile	Gly	Leu	Ile	Arg	Asn	Leu	Ala	Leu	Cys	Pro	
			500				505						510			
Ala	Asn	His	Ala	Pro	Leu	Gln	Glu	Ala	Ala	Val	Ile	Pro	Arg	Leu	Val	
			515				520						525			
Gln	Leu	Leu	Val	Lys	Ala	His	Gln	Asp	Ala	Gln	Arg	His	Val	Ala	Ala	
			530				535						540			
Gly	Thr	Gln	Gln	Pro	Tyr	Thr	Asp	Gly	Val	Arg	Met	Glu	Glu	Ile	Val	
			545				550						555			
Glu	Gly	Cys	Thr	Gly	Ala	Leu	His	Ile	Leu	Ala	Arg	Asp	Pro	Met	Asn	
			565				570						575			
Arg	Met	Glu	Ile	Phe	Arg	Leu	Asn	Thr	Ile	Pro	Leu	Phe	Val	Gln	Leu	
			580				585						590			
Leu	Tyr	Ser	Ser	Val	Glu	Asn	Ile	Gln	Arg	Val	Ala	Ala	Gly	Val	Leu	
			595				600						605			
Cys	Glu	Leu	Ala	Gln	Asp	Lys	Glu	Ala	Ala	Asp	Ala	Ile	Asp	Ala	Glu	
			610				615						620			
Gly	Ala	Ser	Ala	Pro	Leu	Met	Glu	Leu	Leu	His	Ser	Arg	Asn	Glu	Gly	
			625				630						635			
Thr	Ala	Thr	Tyr	Ala	Ala	Ala	Val	Leu	Phe	Arg	Ile	Ser	Glu	Asp	Lys	
			645				650						655			
Asn	Pro	Asp	Tyr	Arg	Lys	Arg	Val	Ser	Val	Glu	Leu	Thr	Asn	Ser	Leu	
			660				665						670			
Phe	Lys	His	Asp	Pro	Ala	Ala	Trp	Glu	Ala	Ala	Gln	Ser	Met	Ile	Pro	
			675				680						685			
Ile	Asn	Glu	Pro	Tyr	Gly	Asp	Asp	Met	Asp	Ala	Thr	Tyr	Arg	Pro	Met	
			690				695						700			
Tyr	Ser	Ser	Asp	Val	Pro	Leu	Asp	Pro	Leu	Glu	Met	His	Met	Asp	Met	
			705				710						715			
Asp	Gly	Asp	Tyr	Pro	Ile	Asp	Thr	Tyr	Ser	Asp	Gly	Leu	Arg	Pro	Pro	
			725				730						735			
Tyr	Pro	Thr	Ala	Asp	His	Met	Leu	Ala								
			740				745									